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# **ALAPSZAKOS SZAKDOLGOZAT**

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# ALAPSZAKOS SZAKDOLGOZAT

*A nyelvsajátítás és a nyelvvesztés folyamata gyermekek és  
felnőttek esetében*  
*The processes of language acquisition and attrition in child  
and adult learners*

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## **1.1 Introduction**

Every human being has a mother tongue and in today's globalized world, most people learn foreign languages as well. Thus, almost everyone has a connection with a language or languages. However, the process of acquisition or learning (difference explained later) is somewhat mysterious. Moreover, even if one has learnt a language, he or she can forget it completely. The aim of this paper is to contrast language acquisition and language attrition by comparing them on the basis of several factors.

Numerous scholars have been dealing with first and second language acquisition and attrition. They described their stages, possible critical periods, and the significant factors influencing these two processes. First and second language acquisition are different themselves; thus, it is worth comparing them. In addition, language learning and loss can be compared, as well. This paper describes language acquisition and attrition and contrasts them on the basis of the following points: critical period, stages, context, and motivation. Furthermore, both processes are influenced by age; thus, a comparison between two age groups, children before puberty and adults, is made as well.

First, it is important to define the main concepts in order to be able to discuss them in detail. In the second and third section of the paper, the language acquisition of children and adults is described. This is followed by a section in which the two processes are compared. In the fifth section, attrition is discussed, and the sixth section contrast acquisition and attrition in general. This part of the paper also includes a table that contains the most important pieces of information about the two processes; it shows how they are different or similar in the aforementioned points: critical period, stages, environment, and motivation.

## **1.2 Definitions**

The Oxford dictionary defines *acquisition* as the “learning or developing of a skill, habit, or quality.” (acquisition, 2018) In this paper, I will be talking about first language acquisition

(i.e. learning their mother tongue) when referring to children; however, in case of adults, second language acquisition (e.g. in case of immigrants) and foreign language learning (i.e. classroom learning) are described. It is important to note that these processes are different from each other; however, they provide a good basis for a comparison between the two age groups

The term *language attrition* was first used in the 1970s; thus, the field of applied linguistics that is concerned with this process must also be relatively young. The Oxford dictionary (2018) defines it as the “loss of ability in a language, or gradual decline of a language, especially in a bilingual or multilingual community.” In other words by the term attrition I will be referring to the situation when a bilingual moves from an L1 environment to an L2 environment, and because of the lack of connection with the mother tongue and the affection of the second language, he or she starts to forget some elements or rules of the L1.

## **2. The language acquisition of children**

The first language acquisition of children is an interesting subject because it differs from the language learning processes of adults in many respects. This section focuses on the main characteristics of acquiring the mother tongue and the different approaches of scholars to this process.

### **2.1 Different approaches**

Language acquisition has been studied for more than 50 years; thus, different definitions were born because of the contrasting approaches. Skinner (1957) was one of the first pioneers of the field; as a behaviourist, he claimed that children acquire their mother tongue with the help of reinforcements. For example, if a child requests something and gets it, he or she notices that the utterance was understood; thus, it must be correct. In addition, the inaccurate statements and words are usually corrected by the parents; therefore, the child can learn from

his or her mistakes. However, the question rises, whether a baby has any innate principles to rely on.

The analysis of the behaviourists was challenged by later researchers. The most notable of them was Chomsky (1995) who claimed that there have to be some inborn rules by which the child is capable of forming sentences without the help of any reinforcement. Gass and Selinker (2008) used McNeill's example to demonstrate a case where correction – or in other words, negative evidence – does not play a role. “Child: Nobody don't like me. Mother: No, say “nobody likes me.” Child: Nobody don't like me” (p. 121-122). This shows that even though the mother tried to teach the correct form, the child insisted on the utterance that was created by his own principles. According to Gass and Selinker (2008), later researchers claimed that children play an active role in language acquisition. Behaviourists like Skinner argued that adults teach their children; however, it became clear that children themselves construct grammatical rules. Also, as the cited example shows, they usually do not rely on corrections.

Singleton and Ryan (2004) defined the *innateness hypothesis* as “the idea that language acquisition is only possible because of an inborn 'language faculty'” (p. 2). According to this hypothesis, there has to be a system behind language acquisition; in addition, if one treats these inborn rules as a stage one or zero in language acquisition, then later stages must exist, as well. The child has to go through these phases before the end of the *critical period*, which is the interval in which the child is capable of acquiring the language and that acquisition is a process which is universal across children.

As mentioned earlier, Chomsky (1995) introduced Universal Grammar (UG), and he defined it as underlying, inborn rules which help children – with no regard to their mother tongue – in language acquisition. These are independent of sensory experience; therefore, there are other factors besides the environment and nurturing that play a role in this process.



These factors and the stages of language acquisition will be discussed further in the next section.

## **2.2 Critical period**

*Critical period* is the interval in which language acquisition can occur. As Singleton and Ryan (2004) explain, this means that language acquisition cannot start before its onset, and if it does not happen before its end, the child will not be able to learn his or her mother tongue. However, there are scholars who claim that the limits and the boundaries of the critical period are not so solid. According to them, those children who start acquisition soon after the beginning of the critical period will be more efficient than those who begin it later.

According to Singleton and Ryan (2004), there are scholars who think that the critical period starts right after birth. They explained it by stating that the early stages (e.g. cooing and babbling) are part of the process of acquisition because that is when babies start trying to communicate. However, Lenneberg (1967) puts the beginning of the critical period to the age of two years based on his investigation of deaf children. According to him, those who are deafened before the age of two cannot complete the process of acquisition as easily as those who are not hearing-impaired. As mentioned earlier, other scholars counter this statement by claiming that children produce sounds – or even one or two words – in their first two years, as well. Therefore, further analysis of the early and the later stages is needed.

## **2.3 Stages**

Singleton and Ryan (2004) state that most researchers agree on the first four early stages. The *cooing* stage occurs between the 1<sup>st</sup> and the 4<sup>th</sup> month. In this phase, the child starts using sounds that are similar to vowels. Later, in the *babbling* stage (4-8 months) consonant-like elements occur. As mentioned earlier, a child learns and uses meaningful words even before the age of two years. The parents hear the first words of their baby in the *one-word* phase (12-18 months). However, these can be interpreted as sentences because for

example, if they want to eat, they only say the word “apple”. It does not mean that “This is an apple.” or “There is an apple.”, because it is usually a request meaning “I want an apple”. The last early stage is the *two-word* phase when the child can already put two different words together. It is important to note that the boundaries between the stages are not distinct; thus, they differ among children.

Around the age of two, children use syntactic cues in order to be able to notice and learn the unknown words in a sentence. This means that the process speeds up, and they learn and use more and more grammatical categories. Several scholars (e.g. Singleton & Ryan, 2004) investigated these later stages of the acquisition; this paper only deals with the major milestones.

According to Crystal and Fletcher (as cited in Singleton & Ryan, 2004), after the age of two, three-element structures occur that contain a subject, a verb, and an object. Three-year-olds can usually use adjectives as well, and they start to connect clauses. Children reaching the final stage (typically after 4.5 years) can link sentences with the use of adverbials. This means that they can make their utterances cohesive. It seems that maturation and language acquisition go hand-in-hand; the older a child is, the more complex structures he or she uses.

It is clear that adults learn languages as well; thus, one could say that the critical period does not end since even 40 and 50 years old people are capable of learning a language that is completely different from their mother tongue. However, scholars use the term critical period in a different sense when they are dealing with second language acquisition. Singleton and Lengyel (1995) claim that the younger a person starts to learn a language, the more efficient he or she will be. Thus, critical period means a definite interval when dealing with first language acquisition, whereas in case of second language acquisition, it is rather a lifelong process during which the language capabilities of people decline steadily.

## **2.4 Context and motivation**

The final focal point that helps to compare the two age groups is the question of context and motivation. Adult learners are usually motivated to learn a language (e.g. to get a language proficiency certificate); however, this motivation varies among individuals. This is not true for children who are not differentiated by motivation. Language acquisition is an instinct for them or an inborn need for communication. Andersen (1990) called this naturalistic or non-instructed learning, and he adds that these learners do not go to classrooms; instead, they have to understand the language itself: its rules and structures. The child hears the adults' conversations and tries to make sense of it without the help of any teacher who would explain the tenses, the grammatical categories. This is one of the biggest differences between child and adult language-learners.

## **3. Language learning by adults**

The next section deals with the features of adult language learning. First of all, it is important to note that this paper mainly focuses on second language acquisition (SLA); however, foreign language learning must be taken into consideration as well when referring to motivation and context. Gass (1990) states that the two processes are mainly differentiated by their contexts (native speaking environment or classroom) and their focal points ("knowledge over skill" or "skill over knowledge" p.43). Many researchers (e.g VanPatten & Lee, 1990) compare second language acquisition and foreign language learning thoroughly; however, this simplified distinction is adequate for the aim of this paper. In this section, the process of second language acquisition is described unless stated otherwise.

### **3.1 The role of the native language**

The main difference between child and adult language-learners is the fact that a child acquires his or her first language, whereas an adult learns a second (or a third and so on)

language, and he or she can rely on his or her mother tongue. Scholars claim that an individual's native language plays a significant role in second language acquisition.

Based on behaviourist principles, Lado (1957) laid down the foundations of the *Contrastive Analysis Hypothesis*. He claimed that the second language learner compares the two languages (i.e. the native and the foreign language) in order to be able to decide whether something has to be learnt or not. In other words, if one learns a language that is similar to his or her mother tongue, then the process will be easier and quicker. For example, if the second language has a tense (e.g. past perfect) that does not occur in the learner's native language (e.g. Hungarian), then he or she needs more time to understand it and to learn it.

Gass and Selinker (2008) shed light on the fact that there were two versions of Contrastive Analysis Hypothesis. The supporters of the strong (or priori or predictive) version claimed that if one compared the two languages, he or she could predict the efficiency of the learning process. According to the other view, one should first examine the learner's errors, and after that, he or she should try to explain these errors with the differences between the native and the learnt language.

To sum it up, scholars claim that it is clear that second language learners rely on their native language – to some extent, at least. One could be under the impression that native language acquisition is a more difficult job. However, it would be a mistake to make such a simplified statement owing to the fact that, as mentioned earlier, children may have an innate faculty; for example, Universal Grammar may contribute to the process, as well. This difference between the learning processes of the two age groups will be discussed in the later sections of this paper.

### **3.2 Stages**

Krashen and Terrell (1983) described the five stages of second language acquisition. In the preproduction phase, the learner cannot answer questions or produce sentences;

however, because of the minimal comprehension, the person can point to the mentioned objects (e.g. a table on a picture). According to Krashen and Terrell, adults start to verbalize earlier than children; they need less input in order to be able to produce words or short phrases. Younger learners often need several months of exposure to the foreign language before they could enter this early production stage. In the third stage, learners start to make grammatical and pronunciation errors since this is the time when they can construct sentences. They have to attend to word order, inflections, tenses, and morphological elements. This, of course, results in errors. This paper does not deal with the fourth and the fifth stages in detail because by that time, learners have excellent comprehension, and they only make a few mistakes. Learners in the fifth stage are almost on a native-speaker level.

Furthermore, it is also interesting to see how second language learners memorize the rules and the words of the target language. Gass and Selinker (2008) claim that the transformation of input to output happens through five stages. The learner notices some parts of the heard or read language; this is called *apperceived input*. Frequent elements are noticed earlier because frequency signals importance. According to Schumann (as cited in Gass and Selinker, 2008), social distance from the target language or culture plays a significant role, as well. The third factor that influences apperception is prior knowledge (native language, world knowledge etc.) One could claim this is what children lack. The final factor is attention. A child usually attends to his or her parents, but a busy adult in a multilingual environment or an unmotivated student does not necessarily pay attention to the input.

This input is then comprehended and memorized by connecting it to prior knowledge. The learner starts using it in the so-called *integration* phase. *Reanalysis* is when the incorrectly learnt forms are revised. After several stages of reanalysis, the final form is memorized.

### 3.3 Context and motivation

As mentioned earlier, the motivation of adolescents and adults varies from person to person. People who have goals for which languages are necessary are usually motivated. For example, they want to move to another country or want to communicate with the locals during a holiday. Alternatively, they might need a language proficiency certificate for a job or for graduation. Of course, after they have reached their goals, this motivation can decline, and this can result in language attrition. Motivation plays a role in both acquisition and attrition; thus, it is worth comparing the two. This paper contrasts them in a later section where other factors will be taken into account as well.

Adolescents and adults usually learn languages in classrooms (FLL) or in a second language environment (SLA), whereas in case of first language acquisition, the child can only undergo a process of naturalistic learning. Bowerman (as cited in Gass, 1990) claims that learners use positive and negative evidence in order to be able to choose the correct forms. Positive evidence comes from those speakers who are believed to know the language properly (e.g, a teacher in case of classroom learning or a native speaker in case of second language acquisition). The listener relies on them and memorizes their utterances. There is no difference between adults and children in this sense owing to the fact that the latter completely relies on their parents. Thus, in their case, the authority figures are the mother and the father who supply the child with positive evidences.

Negative evidence usually comes in form of a correction. Pinker (as cited in Gass, 1990) states that in case of first language acquisition, negative evidence is rare. The question then arises how children can become proficient in a language without negative examples (that play a significant role in case of adolescent and adult learners). Pinker explains this by claiming that innate principles help children in grammatical structure formation.

#### **4. Comparison of child and adult language learners**

There are many differences between child and adult learners; the most significant one is that adults usually learn a second or a third language, whereas in case of children, first language acquisition was described (in section 2). Many questions may arise if one examines the two age groups: Are their learning processes similar? Do they undergo the same stages? Is there a critical period for second language acquisition, as well? This section tries to answer these questions.

As mentioned earlier, scholars claim that adults have an advantage, which is their native language. They use it during the learning process; even if one does not accept the claims of Contrastive Analysis Hypothesis, there is clearly a connection between the two languages. The adult knows what to look for. Furthermore, foreign language learning usually takes place in classrooms, whereas children learn their mother tongue naturalistically. This means that there is a difference in the context. However, second language acquisition is similar to first language acquisition in this sense since in both cases the language to be acquired is used extensively in the learners' environment. In case of FLL, the teacher teaches the correct forms based on grammatical rules; thus, adults can understand why a sentence is grammatical. They memorize words and rules, and based on these, they can produce utterances. A young child only listens to the adults' conversations and – using the innate principles – he or she is able to acquire the language regardless of its complexity.

Moreover, motivation plays a role as well. As mentioned earlier, language learning comes instinctively to children. However, adults need languages for their jobs or personal purposes (e.g. because they would like to move to a different country). Although they are motivated – at least, in most cases -, they have less time for language learning and only a very few of them reach native-like levels. A possible reason for that can be that their objective might be a B2 or a C1 level, which is enough for their purposes. On the other hand, children

(with no handicap or impairment) do not stop the process of acquisition until they reach the native level.

According to Birdsong (as cited in Gass & Selinker, 2008), the Critical Period Hypothesis “states that there is a limited developmental period during which it is possible to acquire a language be it L1 or L2, to normal, nativelylike levels. Once this window of opportunity is passed, however, the ability to learn language declines” (p. 405). The most important word in our case is decline. This means that the critical period does not end; therefore, one could argue that the earlier an adult starts to learn a language, the more successful he or she will be in it. Gass and Selinker (2008) claim that according to the Critical Period Hypothesis, language learning becomes hard or even impossible after puberty. On the other hand, the supporters of *Sensitive Period Hypothesis* (e.g. Long, 1990) hold the view that efficiency in language learning does not drop dramatically after puberty; instead, it declines steadily.

Moreover, if one scrutinizes the stages of learning in case of the two age groups, he or she will find interesting differences. The most noticeable of them is the fact that children produce vowel-like and consonant-like elements before words, whereas adults only start verbalizing when they are confident enough. Parents have to wait one year for the first words of their child, while adults need less exposure to the foreign language in order to be able to produce words and small phrases. Within a short time, they can even form sentences. However, children cannot construct complex phrases so soon; first, they need to get over the two-word stage. In addition, the later stages of their acquisition are special as well because these are connected to word classes. Firstly, they learn nouns and verbs, and they start producing adjectives only later. There is no pattern like this in case of adult acquisition.



## **5. Language attrition**

The following section focuses on language attrition. Since language loss is only possible once a language has been acquired, attrition cannot be discussed without reference to acquisition. First, the stages of bilingualism are described in order to explain possible causes of this process. After this introduction, language attrition is described through examples and the influencing factors are mentioned. Moreover, it is worth comparing children and adults as well because this serves as a basis for comparison between acquisition and attrition. In addition, this section provides an answer to a common question whether there is a critical period in case of language loss or not.

### **5.1 The way to language attrition**

Language attrition can happen if one does not use a language because he or she moves to another country or does not communicate with people who speak the same language. Most scholars examined immigrants when addressing this problem. Seliger and Vago (1991) claim that attrition is connected to the processes of second language acquisition, and to the different phases of becoming bilingual. As mentioned earlier, people use L1 knowledge when they are learning a foreign language. However, scholars noticed that learners make certain errors for which L1 is not responsible. Seliger and Vago claim that this is exemplified by the fact that learners with different mother tongues make similar errors; thus, innate principles must be accounted for this. In other words, it seems that both L1 and UG affect second language acquisition. Seliger and Vago (1991) call this first stage compound I bilingualism.

The second stage is labelled as coordinate bilingualism (Seliger & Vago, 1991). After a certain period, the two grammars are not connected anymore, and L2 starts to develop independently. According to Corder (as cited in Seliger & Vago, 1991), two processes are accountable for this: *restructuring* - applying rules of L1 to L2 - and *recreation* - forming rules specifically to L2. In the final stage, when the learner becomes fluent in L2, the

grammar of the second language starts to influence the L1 knowledge; therefore, errors resulting from differences between the two languages may occur in L1. Moreover, if the person does not use his or her mother tongue for a long time, then attrition may be the result. However, it is important to note that code-switching and code-mixing do not always foreshadow language loss.

## **5.2 The processes of attrition**

Seliger and Vago (1991) make a distinction between externally induced and internally induced attrition. *Rule generalization* belongs to the former one; the learner uses an L2 rule when producing L1 utterances, and this results in ungrammaticality. *Meaning extension* happens when a word of the L2 lexicon has two different meanings in L1. An example for this is “know”, which can be “ismer” and “tud” in Hungarian. The difference between the two disappears because the bilingual uses the same verb for both of them. This clearly shows that L2 grammar and lexicon play a significant role in language attrition. In case of *loan translation*, the speaker translates an L2 word or phrase literally to L1, although his or her mother tongue uses a different expression. For example, “oily hair” means “zsíros haj” in Hungarian; the bilingual translates “oily” as “olajos”, and based on that, he or she thinks that the phrase “olajos haj” (examples cited from Seliger and Vago, 1991) is grammatical.

In the case of internally induced attrition, the change is caused by L1 or UG. According to Seliger and Vago (1991), unmarked or regular forms are easier to memorise than marked or irregular forms; thus, the latter are more vulnerable to attrition than the former ones. This means that unmarked L2 elements do not replace unmarked L1 elements; however, in case of unmarked L2 forms and marked L1 forms, L1 is prone to attrition. *Analogical levelling* means that the bilingual uses a regular form in a case where an irregular form would be grammatical. For example, he says “híden” instead of “hídon” (Seliger & Vago, 1991, p. 10) because of vowel harmony. The exceptions to the rules disappear because of analogical

levelling. *Paradigmatic levelling* is easier to define through English examples. A bilingual whose mother tongue is English can forget the past forms of irregular verbs. For example, he or she says *drived* instead of *drove*; thus, he or she extends the rule of unmarked verbs to the marked ones. *Category switch* may occur as well; in this case, the speaker uses an unusual grammatical category in an utterance. For example, he or she says *the person who cuts hair* instead of using the simple noun *hairdresser*. This list of various forms of language attrition is not exhaustive; the only purpose it serves is to show that attrition affects all levels of a language.

### **5.3 Influencing factors**

In this section, the factors influencing attrition will be discussed; one of them is *plasticity* (the brain's ability to change). When an immigrant moves to another country, he or she has to adapt to the new situation. Lenneberg, Penfield and Roberts (as cited in Köpke, 2007) claim that age plays an important role in this case because younger people tend to adapt to changes more easily. However, this also means that they are more vulnerable to attrition. The two age groups will be further discussed in the next section. Köpke (2007) also describes *activation mechanisms*. Furthermore, more frequent elements will be lost later than the rarely used ones; thus, frequency and easy activation go hand-in-hand.

In addition to brain mechanisms, there are external factors as well, for example, language use. It is a known fact that the more people use their L1, the less they will forget. However, Köpke (2007) points out that people do not have to communicate using L1 in order to be able to avoid attrition; it is enough if they watch TV shows or read books in their mother tongue. Thus, input can help in maintaining a language without the need of production. On the other hand, Green (as cited in Köpke, 2007) claims that although the subject will understand his or her mother tongue because of these one-way communication channels, the connection to the L1 will become looser because it is less frequently (or never) activated.

If a person living in a foreign country is a member of an immigrant group, they will not only hear but also produce utterances. However, these people stand at various levels of attrition; thus, this form of L1 will not be the same as the mother tongue spoken and written in the home country. Grosjean (1992) calls this “bilingual mode”; the members of these groups use code-switching and code-mixing numerous times. When they are communicating with each other, it is hard to understand them for those who speak either L1 or L2 but not both languages.

#### **5.4 Children compared to adults**

Motivation is another external factor influencing attrition, and there is a significant difference between children and adults in this respect. As mentioned earlier, children’s motivation does not vary from person to person; however, adults can be differentiated by their motivation. Thus, the question arises whether there is a similar contrast between them in case of language attrition as well or not?

Köpke (2007) sheds light on the fact that adults who have been using their mother tongue for a long time are different from children. Language is an integral part of older people’s identity; thus, they are motivated to keep it. On the other hand, children do not have this connection with their mother tongue; the ability to communicate with classmates is more important for them. They would like to fit in to the new environment and would not like to be the odd man out. Thus, they use only L2 in school and forget L1 quickly because it is not so important for them. In addition, the aforementioned plasticity also differentiates the two age groups. Children adapt to changes easily because plasticity is influenced by age, and their brain can alter; this also helps attrition.

All in all, in case of children, attrition begins early, and it is a quicker process than in case of adults. Several factors play a significant role: motivation – or the lack of motivation, plasticity, the need to fit in, the connection with the mother tongue that can become an

integral part of one's identity, and the environment (e.g. immigrant groups vs. lone immigrants).

### **5.5 Critical period**

The term critical period was introduced in relation to the language acquisition. It is a controversial hypothesis because there are two views: some researchers (e.g. Lenneberg, 1967) argue there is a critical period and it ends at some point; but others (e.g. Long, 1990) claim that there are sensitive periods rather with less solid boundaries after which the efficiency in language learning declines steadily. The supporters of the latter hypothesis claim that the earlier one starts to learn a language, the more successful he or she will be. It seems logical to reverse this for language attrition because the question arises: are older people less vulnerable to attrition than children?

Bylund (as cited in Schmid, 2011) tried to answer this question by conducting a study in which he examined Spanish immigrants of different age. The youngest ones were one year old, and the oldest ones were 19. He drew the conclusion that first language acquisition ends at around the age of 12. He also found that children before this milestone can lose a language completely, and they undergo the process of attrition quickly. On the other hand, children older than 12 were different; their L1 knowledge remained intact during the study. Thus, there seems to be a critical period in case of language attrition.

This brings up another question, whether this critical period has an end or not. Is it similar to the sensitive period of acquisition after which there is a steady decline and not a complete termination? Pallier (2007) claims that attrition ends at around puberty because several studies showed that adults do not tend to forget their L1 completely. However, if Grosjean's (1992) "bilingual mode" counts as a form of language attrition, then it does not end. Immigrants who use code-switching and code-mixing do not forget their mother tongue completely, but they start to use L2 words in L1 sentences (as shown in section 5.2). This

means that attrition affects adults as well, but not to the same extent as it affects children who can completely lose their mother tongue if they move to a new environment before the age of 12.

### **5.6 What is lost?**

According to Altenberg (1991), bilinguals cannot make L1 inactive while using L2 or vice versa; this leads to problems even if the two languages are very similar because every language has some distinctive grammatical rules. In addition, Corder (as cited in Altenberg, 1991) states that if the bilingual's L2 knowledge is inadequate, he or she transfers elements from L1 to L2. Of course, this transfer is more successful if the two languages are closely related (i.e. similar); thus, according to Kallerman's (as cited in Altenberg, 1991) example, an Italian-Spanish bilingual uses transfer much more often than an English-Chinese one.

People tend to notice grammaticality more easily than ungrammaticality; this has been proven by Costello (1978) who studied a German couple who have been living in the United States for more than 40 years. They did not live in an immigrant community; thus, as mentioned in section 5.3, they were likely to show signs of attrition because of the lack of production. Costello showed them English and German sentences with the same meaning, and they had to decide whether they were grammatical or not. However, what is a proper word order in the one language is not necessarily grammatical in the other one. This experiment proved that most parts of syntax are not prone to attrition. Although the subjects knew which sentence is grammatical in their mother tongue, they were not so confident about ungrammatical German sentences. They noticed ungrammaticality if both sentences (i.e. the German and the English one) were incorrect. On the other hand, in cases where only one example was correct, they tended to judge the incorrect one as grammatical as well. This clearly shows that the two languages affected each other and when the participant had to decide the grammaticality of an L1 sentence, he or she also relied on L2 knowledge. This

confirms Altenberg's claim who thought that L1 or L2 does not become completely deactivated even if the other language is used.

As mentioned earlier, syntax is not as vulnerable to attrition as the lexicon. Jordens and Kellerman (1978) examined verb usage, and they found that verbs with similar spelling (e.g. "break" in English and "brechen" in German) are more often prone to attrition than words that are spelled completely differently (e.g. "take" in English and "nehmen" in German). In simple sentences where "break" is used as a synonym for smashing, the use of "nehmen" is grammatical in German; however, idioms are different in the two languages. Two sentences were shown to the subjects, and they had to decide whether both of them were correct or not. For example, both languages use "break" when expressing that someone does not keep his or her word ("breaking a promise" in English and "eine Verspäche brechen" in German, Altenberg, 1991, p. 198). On the other hand, the weather can "break" in English, but "das Wetter" cannot "brechen" because it would be ungrammatical in German. Because of the similarity between the two words, the subjects rarely noticed ungrammatical German sentences. They lost this knowledge in their L1, and they dealt with the task relying on the corresponding L2 rules. However, they barely made mistakes when they had to judge the grammaticality of sentences with dissimilarly spelled words (like "take" and "nehmen"). This proves that similarity induces transfer, and this results in attrition.

Moreover, it seems that attrition does not depend on word classes because that would mean that for example, adjectives are lost first and nouns are the least vulnerable for attrition. Such a word class-based pattern can be seen in case of first language acquisition, because the first words of a child are usually nouns, and adverbials are acquired much later. However, the process of attrition is different; it seems that one can find a different pattern in case of language loss. Andersen (as cited in Altenberg, 1991) claims that less frequent elements are lost before more frequent ones. The examples in section 5.2 showed that markedness is a

significant factor as well: unpredictable or irregular forms are more prone to attrition than predictable or regular ones. Furthermore, the experiment conducted by Jordens and Kellerman (1978) proved that similarity also induces attrition. Thus, the most significant factors influencing attrition are frequency, markedness, and similarity.

## **6. Comparison of language acquisition and attrition**

As a conclusion, it is worth investigating the similarities and the differences between language acquisition and attrition. This paper compares the two processes on the basis of the aforementioned points: critical period, motivation, environment, stages, and the differences between the two age groups. Relying on the data provided in the previous sections, one can characterize attrition in relation to acquisition and vice versa.

### **6.1 Critical period**

Scholars (e.g. Lenneberg, 1967, Long, 1990, or Pallier, 2007) described critical periods in case of both processes. There is some debate whether the critical period of acquisition starts right after birth or at around the age of two; however, scientists agree on the fact that a child masters his or her mother tongue before puberty (i.e. before the age of 2). After this window, the language-learning ability declines. The strong view of the critical period holds that a person must learn his or her mother tongue before the period ends; otherwise the knowledge will be inadequate. However, based on the data of second language acquisition, it seems that in that case the sensitive period label is more appropriate. People after puberty learn second or third languages, and a simple pattern was discovered in case of this process: the earlier one starts learning, the more efficient he or she will be. Thus, there are two significant intervals in language acquisition: a critical period in case of first language acquisition, and a sensitive period that explains why teenagers can learn languages faster than 30- or 40-years-old adults. The question is whether one of the two appears in the process of attrition as well or not.



The experiments (Schmid, 2011 and Pallier, 2007) described in the section on language attrition showed that children can completely forget their mother tongue but adults cannot – apart from extreme cases like brain damage. It turned out that children before the age of 12 are prone to complete attrition. Of course, adolescents and adults also forget some parts of their mother tongue, but they do not usually lose their entire L1 knowledge. Thus, unlike in case of acquisition, critical period does have a strong boundary here. Children who did not master their mother tongue completely can forget their L1 absolutely; in addition, their L2 knowledge will be native-like since the learning process starts early.

## **6.2 Motivation**

It has been made clear that motivation slows down attrition. If one is not motivated to keep his or her mother tongue, attrition will be faster (Köpke, 2007). In case of acquisition, motivation works inversely, which means that while it slows down attrition, it fastens second language acquisition and foreign language learning. For example, a person who would like to get a language proficiency certificate will learn the language at a faster pace than someone who is not motivated. First language acquisition is somewhat different since learning comes instinctively to children. Nevertheless, one could say that babies are motivated to communicate with their parents. To sum it up, motivation links the two processes; thus, it is a significant factor that distinguishes them.

## **6.3 Context**

The context of language use does not only influence but causes attrition. Language loss usually occurs after the person has moved to a foreign country where the spoken and written language is not his or her mother tongue. Section 5.3 provided an overview on how the language is changed or lost in the new environment. If the person is living in an immigrant group, he or she uses code-switching and code-mixing when communicating with the others; thus, some elements of L1 are replaced by L2 words or phrases (Grosjean, 1992). However,

there are cases where the immigrant cannot communicate with anyone on his or her mother tongue, and this results in more severe attrition.

The context of language learning can quicken acquisition, as well. People living in a foreign country usually learn a second language at a faster pace than those who are only exposed to the L2 in classrooms. Environment is an important factor in case of first language acquisition, as well. The utterances made by the parents and the innate principles help children in mastering their mother tongue. To sum it up, environment is one of the most significant factors influencing acquisition and attrition, as well. Environmental impulses launch both first language acquisition and language attrition. The latter can be slowed down by communicating with people with the same linguistic background. In addition, the aforementioned environmental change (for example, moving to another country) can stop acquisition in case of children; moreover, it can cause complete language loss if the change occurs before puberty.

#### **6.4 Stages**

Children's production starts with the one-word phrase, at around the age of 1. On the other hand, adults start producing utterances in their second language much earlier. However, attrition takes more time; if a person moves to another country, no significant changes can be observed after only one year.

Furthermore, differences between acquisition and attrition can be identified after examining the stages. Section 2.3 and 3.2 described the phases of first and second language acquisition; however, language loss does not have such distinctive stages. The phases described by Seliger and Vago (1991) are the stages of bilingualism. Thus, the relationship between the two grammars changes more times, and the developmental process happens gradually. However, these stages only foreshadow attrition because language loss can only

begin after the L2 grammar starts to influence the L1 grammar. In this case, differences between the two languages can result in errors in the person's mother tongue.

The first errors usually mark the beginning of attrition. All in all, the pre-attrition phase has stages, but the process of language attrition itself does not. This means that acquisition and attrition cannot be compared by its stages. In addition, it has been made clear that the most significant factors influencing attrition are frequency, markedness, and similarity. Thus, language loss differs from first language acquisition because according to Crystal and Fletcher (as cited in Singleton and Ryan, 2004), the latter process is connected to word-classes. Children tend to learn nouns and verbs first, and they start using adverbials and adjectives later. However, no similar pattern can be observed in case of language attrition, so the claim that a person forgets those elements of L1 first that he or she has acquired the latest seems to be wrong.

Table 1 compares language acquisition and attrition on the basis of those points that have been discussed in this paper. It sums up this section and makes the differences between the two processes even more clear.

Table 1

*Comparison of language acquisition and language attrition*

	<b>Language acquisition</b>	<b>Language attrition</b>
<b>Stages</b>	First language acquisition: cooing, babbling, one-word, two-word phase. Word-class based process: nouns and verbs, later adjectives, after that adverbials etc. Second language acquisition: 1. preproduction (no utterances but pointing at mentioned objects) 2. production (only few words) 3. grammatical and pronunciation errors because of the production of more complex utterances.	Pre-attrition phase: 1. L1 and UG influences L2 (compound I) 2. L2 starts to develop independently (coordinate bilingualism) 3. L2 influences L1 (compound II, attrition may begin) The process of attrition is not word-class based. It only depends on frequency, markedness, and similarity.
<b>Critical period</b>	First language acquisition: Starts right after birth or at around the age	Critical period: reversely true. A bilingual child before puberty can

	<p>of two (the first view is supported by more scholars than the second one). It ends at puberty (around the age of 12).</p> <p>SLA or FLL: according to the sensitive period view, childhood is only the peak of the language-learning ability. Thus, the period does not have a solid end, and the efficiency in language learning declines steadily. The earlier one starts to learn a language, the more efficient he or she will be.</p>	<p>lose his or her L1 completely, because the mother tongue has not stabilized yet. Adults are also prone to attrition although not to a complete one.</p> <p>The older one is, the more connection he or she has with his or her mother tongue and culture; thus, the less or she he is vulnerable to attrition.</p>
<b>Motivation</b>	<p>Motivation helps language acquisition. Adults usually have a goal with the language, whereas first language acquisition comes to children instinctively.</p>	<p>The lack of motivation quickens attrition. If one is motivated to keep his or her mother tongue because it is an integrated part of his or her identity, he or she can avoid attrition by using the language.</p>
<b>Context</b>	<p>Usually classroom (instructed learning, FLL) or a second language community (naturalistic learning, SLA).</p> <p>First language acquisition: similar to the second language community (naturalistic learning, SLA), but this “second language” will be the child’s first language or mother tongue.</p>	<p>Environment is one of the most significant factors.</p> <p>Immigrant groups: code-switching and code-mixing.</p> <p>Immigrants with one-way language use: they only receive input in L1 (TV or newspapers) but do not produce output (second language community): faster attrition.</p> <p>Immigrants who do not use their mother tongue at all (second language community and no TV shows or books): even faster attrition.</p>

## 7. Conclusion

Table 1. shows that there are several similarities between language acquisition and attrition, although some factors (for example, the critical period or motivation) influence the processes reversely. Undoubtedly, the paper only listed the most significant aspects that served as a basis for comparison. Sections 2 and 3 along with section 5 described first language acquisition, second language acquisition, foreign language learning, and language loss. The aim of the final section was to draw conclusions on the basis of the data reviewed in the previous parts of the paper.

Moreover, two age groups were compared because it turned out that these behave differently when it comes to learning or forgetting a language. Most scholars agree that children are more efficient in language learning; however, they are also more vulnerable to attrition. Although there are some dilemmas about the critical periods (and sensitive periods), one can draw the conclusion that the earlier one starts to learn a language, the more efficient he or she will be. In addition, young children's vulnerability to attrition also shows that this phase is peculiar when it comes to languages.

To sum it all up, the experiments and studies reviewed in this paper helped contrast acquisition and attrition. The examples listed in sections 2 and section 5 make it more clear how the two processes work. In addition, brain mechanisms were explained in relation to language loss; this also made it clear that there are some universal factors that influence this process, and just like innate principles in case of first language acquisition, these are present no matter what language is studied. All in all, both language acquisition and attrition are interesting subjects and the aim of this paper was to characterize them in relation to each other because this way, it is easier to understand them.

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