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**Comparing music, lyrics and singing in teaching**

**Swedish children the phonetics of English**

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## Abstract

Throughout time, teachers, philosophers and scientists have recognized the valuable place of music for language learning and correct pronunciation. There are many researches over the last twenty years who has worked on different theories of language learning through different strategies. Many of the researchers find the pedagogical relations between language and music. The first part of this pilot study focuses on the factors that influence learning the second language as English by different theories. The study continues on comparing different strategies of learning the phonetics and correct pronunciation of English words by examining their learning through different ways such as hearing and reading.

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## **1. Introduction**

The study of listening within the field of cognitive psychology focuses on the role of prior knowledge in comprehension and pronunciation. Cognitive psychology is about how people remember, think, speak and solve problems in learning a language. Listening can be considered as a dimension of cognitive psychology, what goes on in a listener's mind when he/she listens to new words. The question is: can music help pupils learn a second language? Parents may have observed their children acquiring the first language easily, yet the learning of a second language, particularly in an educational setting, often meets with great difficulty and sometimes failure. Another question is: Can the phonetics of the second language be learnt by listening to a song or by reading the lyrics. There are also some other strategies mentioned in this paper.

### **1.1 Aim of the study**

The aim of this pilot study is to explore the important role of music in learning the phonetics of words in English as a second language for native Swedish children. Another aim is to examine how many pupils can remember new words either by listening to a song or by reading the lyrics. The main idea is to examine children's memory. The method is to firstly divide the students into two groups. One group listens to the song and the other group reads the lyrics. The aim of this method is to study the children's pronunciation and how correctly they acquire the second language. The motivation of the two groups will be compared.

### **1.2 Research questions**

The research aims to answer these questions:

- 1- What is the more effective way of teaching a second language for better memory and a better system of learning phonetics of a new vocabulary in L2? Teaching strategy by listening to the music or reading the lyrics?
- 2- Does singing improve learning the phonetics of the second language?
- 3- Do differences in gender and age play a significant role in learning L2 through music?

### **1.3 Limitation of the study**

One of the obstacles that should be mentioned in this pilot study is the short period of time. For examining a memory test among children, more research over a long period of time is needed to have more reliable results. As mentioned earlier the aim of this study is to examine pronunciation learning of a second language acquisition by means of either music or text. However the limited period of time did not allow the pupils to study the music as much as would be needed. Since the children were very young, they did not have access to a CD player themselves and they needed some help from their parents. In this case, there were some difficulties. For example, the parents were not home or did not have time for this extra school work. Moreover, close interaction with children is necessary to have their attention and get the results without haste and fear. Making this connection was impossible due to shortage of time. In other words, this test would need a more flexible design towards pupils to have their attention in a relevant way.

Language understanding was the other limitation of this study. Since the children at the age of seven to ten were not really familiar with English, Swedish was needed to ask questions and make clarifications. Fortunately, there were only a few misunderstandings because of the language barrier.

## 2. Theoretical Background

Different methods of teaching second language (L2) are needed for different generations and ages due to different cultures and societies (Cameron, 2010). At the same time the importance of learning the correct phonetics of ESL (English as a Second Language) is mentioned by teachers and researchers (Hardcastle, 2010, pp. 81–82). Vowels are one of the important features of the world's languages. There are two categories for vowel perceptions: vowel identification and vowel constancy. Vowel categorization (identification) is that how listeners identify different vowels of their language. Vowel constancy is how listeners realize the variations of any particular vowel (Rosner & Pickering, 1994). Therefore, we need to consider the differences between the phonetic structure of the first language (L1) and the target language (L2) to help learners to understand the phonetics of the second language.

Selinker's theory explains that there is a "psychological structure latent in the brain" (Selinker, 1972, pp. 209–241). He calls this theory inter-language theory. This linguistic system functions when a learner attempts to produce the standard forms of L2 phonetics (Selinker 1972). Inter-language is between the mother tongue and the target language. A detailed study of inter-language can help a researcher understand the learner's problem and provide solutions for the learners. Apparently, an efficient way to teach children a second language is in a way that makes them motivated and interested to start and continue learning L2. In Canada and Hungary, different studies have been done in the classroom to encourage young learners in order to teach them L2 like the study which has been done (Csizer & Dörnyei, 2005).

One recent study has been done in Sweden by Khezri (2011), who used music lyrics with adult learners between twenty and thirty years old, to test if they could learn vocabulary through lyrics. The learners were from different countries with different cultural backgrounds who wanted to learn the Swedish. The students were at the same level of Swedish and were chosen randomly from six classrooms. Then they were divided into an experimental group and control group. The aim was to teach Swedish vocabulary as if it was their second language. This was done by reading the text of a Swedish song called *Sången till friheten*. The translation of the lyrics was also provided for the learners and there were 15 key words out of 81 that were underlined for more emphasis. However, the results showed that reading the lyrics of the music had a negative effect on short-term memory.

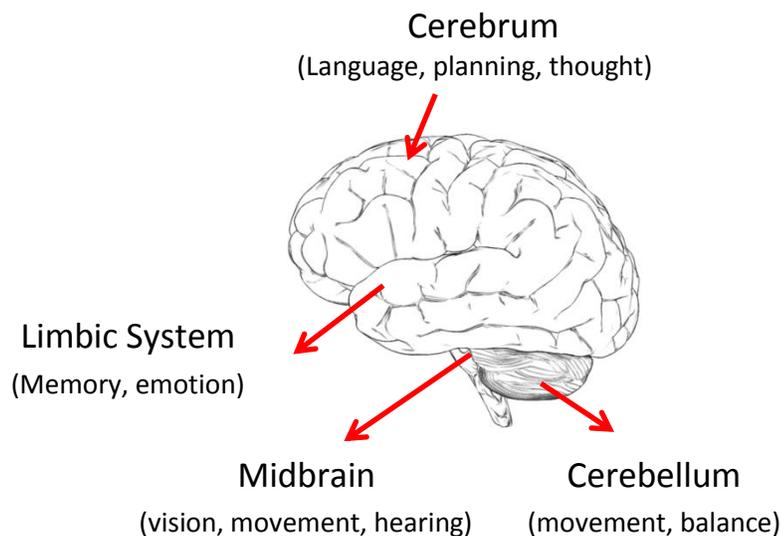
It is generally assumed that there are two different processes of learning L2. One of them is so-called top-down process. The other is called bottom-up process. In the top-down process, words are understood by background knowledge of the first language. The bottom-up process is from language to meaning but the top-down process is from meaning to language. The learners can learn some vocabulary through the bottom-up process, such as recognizing key words, and grammatical relationships between important elements in sentences and they may also use stress and the intonation that they learnt before to identify words and retain the inputs while it is being in process (Richards, 2008).

On the other hand, Schmidt (1990) argued “we won’t learn anything from input we hear and understand unless we notice something about the input” (Richards, 2008, p.15). Mora (2000) in a music therapy research asserts that “in any oral interaction only 15 percent of the information corresponds to the verbal language and 70 per cent is performed through body language and the final 15 percent related to intonation and the musical character of language” (Mora 2000, p. 147). There are many argues and contests about the percentages that Mora mentions. Mora’s belief highlights the importance of body language among other ways of interaction while other language researchers may believe that body language is not the most important way of interaction. These percentages and relations vary depending on the nature of the language task, interlocutors and intentions. These interferences exist between second language learning and listening to music or reading text which can either delay or speed up the learning process. These factors should be mentioned since they affect the learning process (Mora, 2000). Some of the related issues are classified below.

## **2.1 Language and Memory**

Learning is a long process which needs to be practiced and repeated for periods of time. Teachers use different methods of teaching. Some teach second language by using the art and science of theatre and others use music to teach ESL. Generally, the ability of remembering the facts that are happening around us is consciously called “declarative memory”. The limbic and cerebrum areas play a large role in learner’s perception, emotion and cognition. In order to remember a song, it should be heard several times. These two areas of human cortex, functions actively when a learner wants to keep the information and when the learner wants to use that information. Executive functions in the brain are responsible for monitoring the information which is saved in long-term memory (Herr, 2007).

The prefrontal cortex interacts with a large network of cortical areas. It encodes and maintains all types of information such as sounds, images, colors and important events. As is shown in Figure 1 the prefrontal cortex includes the limbic system that is responsible for memory and emotions and the frontal lobe is cerebrum region which is responsible for language and communication, planning and “thought”. The midbrain guides the movements and hearing in learners. These three parts develop rapidly in young children. The more children interact and repeat the more the brain is developed (Herr, 2007). Hebb (1949) has mentioned when the words or sentences are repeated many times they will be placed in the long-term memory and are possible to remember easily. The Repeated Persistent Stimulation Theory of Hebb explains the adaptation of the neurons in the brain during learning process. On the other hand Cameron’s view is that children may not be able to keep large tasks in their mind because of their limited attentional capacity to process the information they get (Cameron 2010).



**Figure 1: Different functions of human brain with different duties**

Different cortical networks are responsible for particular kinds of information. There are two different divisions in memory known as semantic memory which are responsible for general facts in various types of information and episodic memory which is responsible for behavioral change. The cognitive neuroscience of music includes listening to music, reading, writing and etc. This kind of brain function is called Brain-balance Mechanism (Melillo, 2009).

This mechanism shows how the hemispheres are connected. It can be ascertained if one hemisphere is more dysfunctional or immature than the other (Melillo, 2009). The brain-balance mechanism creates a balance between the hemispheres. One of the methods of using brain-balance music is to listen to music three to five times for ten to fifteen minutes. This is the method used in this pilot study. The brain balanced mechanism is used to examine which hemisphere is working better by using either right or left ears to listen (dichotic listening) through headphones (Melillo, 2009).

Children naturally love music since songs are an integral part of being human. Richards (1990) also believes that when a song is played, two ways of processing exist. One is the bottom-up which means that listener may build up words, sentences and meanings from the sounds they hear, and the second is a top-down process that tempts the listener to use his/her background knowledge to use a correct form of word or understand the meanings. Both ways help to develop listening comprehension and pronunciation. He also claims “music, rhythm, and movements create a link between the right brain’s processing of music and rhythm and the left brain’s processing of verbal information” (Richards 2008, p.109). Music has a complex process and both hemispheres function to help learners associate and comprehend words in the lyrics. Learner’s emotion also reacts towards music and it makes learner more or less motivated which is controlled by the Para-limbic region of the brain (Richards, 2008). Gaser and Schlaug (2003) mentioned that the brain structure of professional musicians differs from non-musicians. They have discovered the volume of gray matter (a major component of the central nervous system) differs in motor, auditory and visual-spatial brain regions among professional musicians, non-musicians and amateurs.

## **2.2 Music and learning L2**

Music is a thread that can tie together the best techniques in second language learning. New brain based research needs some changes in teaching strategies. The strategies include using voice pattern, games, movement activities, art exercises (pantomime), telling stories, and listening to music. Using these strategies can either stimulate the classroom mood or relax the intensity of focus for better memorizing (Caine & Caine, 1994). Chen-Hafteck states that “music and language are the two ways humans communicate and express themselves through sound” (Chen-Hafteck, 1997, p. 85). There are some vowels and consonant constructions that children can learn

faster than other vowels and consonants. However, new learners may have problem in pronouncing some words and this can cause pronunciation errors (tautology) or semantic placements (semantic errors). Semantic placement means those words that sound similar in pronunciation but they have completely different meanings. For example, words such as 'bird' and 'bear' or 'ship' and 'sheep' have different meanings but they sound quiet similar. This can cause confusion for the second language learner. Listening to music or audio sounds can help the pupils to learn the correct pronunciation.

Music training and listening is not only beneficial for processing music but if learners have years of experiences may also improve how sounds are processed in language and emotion. It has been stated that music influences humans' learning in both good and bad ways (Collett, 1992).

There are different benefits in music method comparing to other methods like reading. Firstly, music can improve concentration and memory. This depends on the time of the day the learner is listening to music, the type of music and the subject the learner is studying (Hartjes, 2010). Secondly, it can motivate learners to acquire the new language in fun ways and decreases the stress in the classroom by making friendly and enjoyable situation. According to Krashen's input hypothesis (Krashen, 1981) if the information were comprehensible, the learners would get more positive results (output) of listening to music in a classroom. This means that by using music in the classroom pupils are helped to have more positive outputs. This is seen to be better than using the more traditional ESL method such as reading books. Music is used as a tool to help pupils to remember different linguistic structures which can be identified by different culture and background (Merrell, 2004).

As Krashen (1982) argues, some learners learn the rules of language such as phonetics and grammar, correctly and some learn them incorrectly. In other words, there are individual differences among learners. Krashen's argument is based on the Affective Filter Hypothesis (AFH). He states that language can be acquired best when teachers give comprehensive input to the learners. However, learning the second language depends on the learner's receptiveness and therefore the more anxious, stressful, angry, bored and unmotivated the learners are, the stronger their affective filters become and the more difficulties they face in learning a second language. In other words, the affective filter is an imaginary wall that exists between a learner and the target language input. The filter turns on when learners are less motivated, less self-confident or bored in the classroom. In order to maintain a weak affective filter, teachers must adopt appropriate attitudes towards learners. To turn this filter off teachers must provide a positive atmosphere such

as using songs in the classroom to promote language learning. With transparent affective filter learning the four skills (reading, listening, writing and speaking) of a target language would be developed (Saricoban & Matin 2000). Lo and Li (1998) believes that songs provide a break in the classroom and develop a non-threatening atmosphere for children to learn English.

However, learning the second language through music is not always beneficial. One of the major problems in many songs is use of non-standard grammar which may confuse pupils. On the other hand, the use of non-standard grammar is very common in daily usage and learners should learn the daily usage of the language to be able to communicate in the L2 society. Another important problem that the music method may bring is that pupils might enjoy the music so much that they do not care enough to learn the words with the correct pronunciation. Then the teacher will claim that the traditional method is more effective than the modern one which is using music to teach the second language (Huy, 1999).

Another study by Lamb and Gregory (1993) proves that there is a relation between musical aptitude and phonological awareness. For example, children with musical aptitude have greater phonemic awareness than those expose to less musical methods of learning. Listening to music especially to a rhythmic song may help children to have better listening skills and to improve verbal memory (Lamb & Gregory, 1993). Another study by Mora (2000) argues that not all music is appropriate for second language classrooms learners. It is important to choose songs which lead to better brain functioning and enhance the potential in pupils for learning words and increasing their attention. Songs that have a strong rhythm and accurate times beat can affect the learner's brain better (Mora, 2000).

### **2.3 Singing versus text, emotion and learning**

According to different cultural backgrounds, some mothers often sing to their infants and some do not. One of the effects of singing is to help infants as well as children learn language faster (Winkler et al. 2009). In 2009, researchers from Hungary and the Netherlands reported that, by measuring brain waves, children are able to detect differences between the waves and the rhymes. Music and singing affect the frequency of the brain waves, breathing and blood pressure. Brain waves can be measured by an electroencephalogram. These brain waves such as Alpha and Theta can affect language learning and healing (Winkler et al. 2009).

Theta waves can improve the long-term memory and heal the brain by controlling the secretion of cortisol hormone. This wave is stated as the most powerful waves for learning a new language.

Children have high amounts of Theta activity. Therefore, they are able to learn new languages much more quickly and easier than adults (Winkler et al. 2009).

Murphey (1990) mentions learning through the text is not enough to achieve the correct form of pronunciation but singing is also needed to complement the results. Mothers generally use a simple grammar to sing for their children and sometimes they use baby talk (motherese) and nursery song to improve their infant's listening skill language facility (Murphey, 1990).

Since teaching second language phonetics is boring and sounds too serious for pupils, finding indirect ways such as playing word games and singing a song, would be more beneficial and interesting. For example, using pop songs to sing in the classroom will enhance children's ability to learn words as well as raising their motivation to learn second language. As it is examined by Senel (2006), listening is the first language mode and plays a large part of language skills in the schools and pre-schools. Listening provides a basis for all aspects of language and reading development.

Most teachers assume that children are listening to them while they are talking in the classroom. However, not the entire students listen to their teachers. It is tested that some students have a better hearing capacity than others referring to their practice periods, genetic factors etc. (Senel 2006). In fact developing good listening skills will achieve by explicit instruction and training. As Jalongo (1995) believes, "if we expect children to become good listeners we need to teach them to become active listeners" (Jalongo, 1995). Musical activities are cited by researchers as effective experiences for building listening skills in the classroom (Hirt-Mannheimer, 1995). Rhythmic text such as repetitive phrases in each line can also enhance attention and motivation for children to follow reading sentences. Such phrases make students to continue reading even if they do not understand the meaning of the words (Adams et al. 1998). Each word consists of different syllables and word stress to be pronounced. Sometimes a pause in a wrong place in the word may cause misunderstandings when the children listen to a song. Saying the words too fast, too many movements and having the word stress in a wrong place, can cause confusion and make the learning process complicated. Singing songs can promote the right way of pronouncing words (Adams et al. 1998; Ericson & Juliebo, 1998; Yopp & Yopp, 1997).

Gardner (1985) emphasizes, motivation is the most influential factor for learning second language in either young learners or adults. It is shown that the right hemisphere is responsible for the emotional content of stimuli (Montgomery, 2011), while certain aspects of language

learning deals with the left hemisphere. Moreover, using a musical instrument such as guitar or accordion can have a stimulating impact on young children's phonological awareness. For example, a child with a high level of phonological awareness is capable of recognizing rhyming and to break words into syllables as well as to identify the beginning and the ending sounds (Adams et al. 1998; Ericson & Juliebo, 1998; Yopp & Yopp, 1997). Emotion is considered as an initial component of human nature which can affect brain functions (Montgomery, 2011). The function of the hypothalamus, one of the regions of the brain, and some hormone secretions such as adrenalin and cortisol etc. can affect learner's emotions, motivations and can cause anxiety by changing the blood pressure. The brain's hypothalamus secretes a hormone that causes the adrenals to secrete cortisol hormone which can affect different feelings such as motivation, stress, and anxiety and memory functions. However, motivation and anxiety can also influence on the hormone secretions and their functions which can control learning process (Damasio et al. 2000, pp. 1049–1056).

#### **2.4 Influence of L1 in L2**

The first language influence second language learning. Children who have completed learning their first language (mother tongue) might face some difficulties learning the second language since they compare the new knowledge with the old ones (the top-down process). Children who are over 5 years old are in this category since they have completed learning their mother tongue to some extent. However, when the first language learning is not completed, learning the second language is easier. The interference of the first language into the second language has some advantageous and disadvantageous. Some of the advantages are, for example, the positive attitudes of students towards learning the new language, and the motivation and disciplines that teachers may bring to the class in order to help children, learn the second language enthusiastically. Teachers' poor attitudes or inappropriate management leads to children's hesitation and anxiety towards learning (Nation, 2003). Krashen (1988) believes that teacher's poor attitude can cause stress in the classroom. Anxiety brings negative effect on the learning of second language and teacher's appropriate attitude can bring positive motivation to children (Krashen, 1988).

Swedish is a North Germanic language of the Indo-European family. Therefore it has several words and sounds in common with English. For example, the letters of the English alphabet that are used to represent the vowel sounds are five as /a/e/i/o/u/y. The letters of the Swedish alphabet

that present the vowel sound are nine as /a/e/i/â/ö/u/o/y/. However there are many other vowel sounds in English which are divided into two groups: the monophthongs or pure vowels, the diphthongs and triphthongs. There are twelve vowels and ten diphthongs and triphthongs in English phonetics (Nation, 2003).

According to Selinker (1972) learners generally obey some strategies of their culture and their particular way of language communication. Selinker develops his own strategies (indefinite strategies) consciously or subconsciously. He transfers words, phonetics and meanings from the learner's previous experience to the target language. Selinker's theory also applies for grammatical and semantic errors which are called inter-language errors. They use both the top-down and the bottom-up process to learn the new words in L2.

The interference of the second language into first language during the learning process causes fallacy of transparency which means that some errors happen while learning the second language because of similarities between two languages. Sometimes, words are easily recognizable through the background of the first language due to their similarity. However, this similarity can also make confusion in the learner's mind and cannot always be reliable to follow the background knowledge. Sometimes, using a word's transparency misleads learners to pronounce words and comprehend them correctly. There are some words with similar forms across languages which can create greater difficulties for the learners. In this case, the learner assumes that he/she pronounce the words correctly but he/she is mistaken. This is called deceptive transparency (Nation & Carter, 1989). However, according to Dulay and Burt (1974) and Gillis and Weber (1976), first language interference is rare in children's second language acquisition when less or no information (input) is given to them. In other words, using old knowledge (top-down process) usually occurs when there is less input and the children have less or no knowledge of the second language (Krashen, 1988).

## **2.5 Gender & age factors**

Several studies have been done in Canada to examine whether there are any gender or age differences in learning the second language (Csizer and Dörnyei, 2005). The purpose of these studies was to examine gender differences in motivation factors while learning the second language as French between the age of 7 and 10. The questionnaires were split up among 380 pupils. Two hundred and twenty eight students were in grades 7 to 9. About 59% of the participants showed most interest in learning the second language at the age of 7 and the results

showed that boys were less motivated to learn the second language than girls. Girls made more effort to learn the new language than boys. Also in a study by Csizer and Dörnyei (2005) similar research is conducted in Hungary among young teenagers that yielded similar results.

Gardner's (1985) hypothesis states that any individuals who are learning a second language should adapt him/her to the behavioral patterns of the target group. According to Gardner's there are two types of orientations; integrative and instrumental. Each person has several reasons and motivations to learn the second language. These motivations are called integrative orientation or immediate goal. The other motivation is Instrumental orientation which is potential pragmatic gains of L2 proficiency such as learning a language in order to get a job or to pass a test.

If learners have a positive attitude towards the L2 culture the researchers may see more success in the results. For example, children's motivation can be to understand the language of TV channels or an English song etc. However, Csizer and Dörnyei (2002) show the complex character of motivation as an individual factor. They state that the role of integrative orientation is not enough for learning L2. The learner's orientation depends on different factors such as gender, age, education, linguistic background, the difficulty of the target language etc. They emphasized more on "identification with values associated with L2 community" (Csizer & Dörnyei, 2002, pp. 421–462). Gardner (1985) believes that an instrumental or integrative orientation must be combined with motivation and by this motivation he means both desire and effort in both genders in order to achieve positive results while learning L2.

Another study has been done among upper elementary children at the University of Nevada, Reno in United States. The researchers of Nevada University have examined the attitudes towards learning L2 by singing and movements. Children were separated in a group of boys and a group of girls and they were asked to sing with the played song that they already knew and made the movements with their teachers. The results shows that few boys sang the songs but most of them did the movements, but the majority of the girls sang and did the movements at the same time. This method very much depends on the teacher's ability to motivate children of different genders and ages to provide a friendly and enjoyable classroom (Iverson, 2011).

Sax (2005) describes American society as "gender-blind" meaning that, the gender distinction is ignored. Marshal (1998) describes gender stereotype and learner's different motivation in different ages in the music classroom. The aim of all the exams was to motivate both genders to promote their music education (Iverson, 2011). There are also some different explanations and aspects in the age factor. As Lenneberg (1967) states, one of the hypotheses is the critical period

hypothesis, which examines children's hearing ability at different ages. The hypothesis argues if age influences hearing loss. The hypothesis presents two different possibilities: firstly, children can hear better before puberty than later ages. Secondly, there is not a big cut-off point for language learning in different ages. For instance, as Singleton and Ryan (2004) states, the hearing sense will be lost gradually in later ages. The problem of hearing starts when a gradual loss of the tiny hair-like cells in the inner ear occurs. This cell acts as sensors to detect sound waves. It is examined that children and teenagers can hear very high pitched sounds compared to older ages especially above 65 years old (Macnair, 2011). Yet, there are some arguments about age differences in learning the second language. In short, different ages bring various motivations, and may need different neurolinguistic processes by alter cognitive development (Singleton & Ryan, 2004). As Jalongo (1995) mentions, if the learners are not active listeners they will lose their hearing ability gradually. Learning happens when learners repeat what they learnt before and listen to pronunciation of the words for several times to keep the correct form of new words in their long-term memory. Active learners at any age are relatively capable of learning new languages (Jalongo, 1995).

### **3. Methods and materials**

In this study, thirty children between seven and ten years old were chosen from a mixed preschool and elementary school in Linköping. The children did not know English and their native language was Swedish. The first part of the research was done by choosing twenty students and dividing them into two focus groups. Focus group 1 were ten students who were chosen to listen to the British version of the song, *there was an old lady who swallowed a fly* (focus group 1), and focus group 2 were ten other students who were chosen to read the lyrics in a colored format (see Appendix I). The first focus group listened to the CD and the second focus group read the lyrics of the same song. There were five boys and five girls in each group. Two days were defined for practicing the song. In both groups, children studied the song for ten to fifteen minutes each day and after two days they answered some questions (see Appendix II). The lyrics of the song were printed in color to attract more attention. All the first lines of the stanzas of the song were defined by red color for highlighting. If children did not answer the questions for different reasons, they were asked to read some animal names which were underlined beforehand. This helped them to remember what they had heard or read before.

**First study:** The study had four different purposes. One was to examine how many words and how many correct pronunciations the children remember. The two groups were compared at the end. So, some of the questions were designed in the format of memory questions. The second aim was to define pronunciation differences between the two groups, and to examine how enthusiastic and happy they were while studying the music or the lyrics of the L2. Thirdly, it was assessed whether there were any gender or age differences between these two focus groups. The fourth aim was to examine different singing methods to see how the children are motivated. They were asked if they liked the music or not. Their ages were noted during the interview. A quiz was designed to ask some open questions to see if the children remembered any words or the story and if they could pronounce animal words (Appendix II). In this quiz, the children were supposed to say the words they have heard or read before and the questions (Appendix II) were asked both in English and Swedish because the song was in English but the children were not familiar with English. Since they have not yet started an English course at school, they were not familiar enough with English but they had some basic knowledge. The children were tested to see how they pronounce the names of animals which had vowels in between two consonant such as “dog”, “cat”, “bird”, “cow”, “horse” and “spider”. Then their voices were recorded so it could be heard if they pronounced words correctly and what mistakes they made. Parents were asked to sign a contract agreeing to the recording of their children’s voice. Twenty seven parents out of 30 accepted to sign. Twenty seven pupils’ voices were allowed to be recorded: Nineteen pupils in the first study and eight pupils in the second study. The children were recorded one after another and each was recorded for an average of two to three minutes. Some notes were taken regarding how motivated and interested the children were by asking if they like the music and the lyrics that they had during the 2 days.

**Second study:** The second study was similar to the first but the music was played live by guitar for five students. The second focus group read the text as in the previous method. The song was played for nearly fifteen minutes with some pauses. This research was done to obtain more reliable results and get a broader view in children ways of learning. The study can be completed by considering the children’s interest and motivation to learn the new language by comparing the live music with the lyrics. Finally they were asked the same question as in the previous method and they were recorded individually. After that a statistical comparison was made by hearing children’s answers as it is defined by + (plus) and – (minus) in Table 3.

#### 4. Analysis and results

First of all, children were stressed since they were not familiar with the examiner and the quiz. So, face-to-face interaction was chosen to examine emotions more reliably and to have more interaction with the children. It was also easier to assess the phonetics of the words more clearly and make the quiz easier to record.

In Table 1 + (plus) signs indicate “Yes” or positive answer and – (minus) signs indicates “No” or negative answer. The first vertical column shows the number of students who were allowed to take this quiz and the horizontal column on the top of the chart presents some questions regarding the aim of the study. The second column shows the participants who listened to CD. The third column shows the children who read the lyrics. The fourth column shows gender. The fifth column shows whether the participants remember any words or not. Most of the pupils remembered some words, and there were just 3 children who did not remember anything in the first study. So they were asked to read the underlined words instead. The sixth, seventh, eighth and ninth columns show if the participants pronounced the animal words accurately or not. So – (minus) under any of the column means that the pupils pronounced the words incorrectly and + (plus) shows that their pronunciation was correct. The tenth column which is named “come for the quiz” shows how many students had permission to be recorded. There was just one person who couldn’t participate in the first test. The eleventh column identifies if the pupils like to listen to the CD or the text.

**Table 1:** The analysis and results of the first method

Sign +: indicates correct answer and means yes    Sign -: indicates incorrect answer and means no

Number of students	CD	Text	Gender	Don't remember anything	Correct pronunciation of dog	Correct pronunciation of spider	Correct pronunciation of cow	Correct pronunciation of bird	Come for the quiz	Like or dislike music
1	+	-	B	-	-	+	did not say	+	+	+
2	+	-	G	-	-	+	+	+	+	Did not know
3	+	-	G	-	+	+	-	-	+	So So
4	+	-	B	-	+	-	+	-	+	Did not know
5	+	-	B	Shy	+	+	+	-	+	Did not know
6	+	-	G	-	-	+	+	+	+	Did not know
7	+	-	G	-	+	+	+	+	+	+
8	+	-	G	-	-	+	-	-	+	Did not know
9	+	-	B	Shy	-	+	+	+	+	-
10	+	-	G	-	+	+	-	+	+	Did not know
11	-	+	B	-	-	-	-	-	+	+
12	-	+	B	-	-	-	-	+	+	Did not know
13	-	+	G	-	+	did not say	-	+	+	+
14	-	+	B	+	-	+	+	-	+	-
15	-	+	G	-	-	-	-	-	+	Did not know
16	-	+	B	-	-	+	+	+	+	Did not know
17	-	+	G	-	-	-	-	+	+	Did not know
18	-	+	B	-	-	+	did not say	-	+	Did not know
19	-	-	B	-	-	+	-	+	+	Did not know

Most of the students hesitated to answer this question. The test for the second method was the same and the questions were the same as the first method. But the atmosphere was different for both participants and examiner. In other words, in the first method the atmosphere was more serious and unfriendly while in the second method, pupils gathered around the singer and felt more relaxed and less shy to interact.

Twenty nine pupils out of total 30 were present to answer the questions in the first method. One girl didn't come for the quiz because she was not allowed to be recorded. Out of these 29 pupils, 5 boys and 5 girls listened to the CD and 5 boys and 4 girls had the text to read. From a total of twenty nine pupils 2 children did not remember any words or maybe they were too shy to answer. One of those two children was a boy who listened to the CD and the other was again a boy who read the text. So these two children were asked to read the underlined animal names instead. Since they failed to remember the words the next test was taken as a pronunciation quiz. Hence, they guessed how the words should be pronounced. The reason that some animals or insects are not mentioned in the chart is that the children were quite good at pronouncing them and there were no mistakes in words such as "fly", "cat" and "horse".

#### 4.1 Results of the First Study

In Table 1 we have different number of animal's names such as spider, bird, dog, and cow which were pronounced differently and sometimes the same. Table 2 shows the results of Table 1 by defining different genders and the number of correct and incorrect pronunciation of the words as it is shown in the first column. In the second column the sign \* shows that one girl who had a text did not answer the correct form of the word spider. In the third column there are two boys one that had a CD and one that had a text and they did not answer the questions. In the last column, one of the boys who had the CD did not remember anything. So they were asked to read the underlined animal names and to guess the correct form of pronouncing them. For greater clarity the details will be examined word by word.

**Table 2:** Results of the first study considering genders  
The sign \* indicates the missing pupils who did not answer the questions.

Correct pronunciation for dog	Correct pronunciation for spider	Correct pronunciation for cow	Correct pronunciation for bird
6(3 girl, 2 boys, CD)(1girl, text)	13(6girls, 3boys, CD),(4boys, text)*	8(3girls,3boys*, CD),(2boys, text*)	11(4girls, 2boys*, CD), (3boys, 2girls, text)
Incorrect pronunciation for dog	Incorrect pronunciation spider	Incorrect pronunciation for cow	Incorrect pronunciation for bird
13 (3girls, 2boys, CD),(6boys, 2girls, text)	5(2boys,1girl, CD),(2boy, text)	8(2girls, CD), (3girls,3boys, text)	8(2girls, 2boys, CD),(3boys, 1girl, text)

**Dog:** The word that was most often mispronounced was ‘dog’. The pronunciation of the dog that children used was [du:g] instead of [dɔ:g] in English (UK. phonetics). Six children out of 19 pronounced this word correctly. Five of them were those who listened to the song and one girl had a text. From these 5 pupils who had a song 3 of them were girls and 2 of them were boys and 13 pupils pronounced it incorrectly. From these 13 students, 5 of them listened to the CD (3 girls and 2 boys) and 8 of them had the lyrics (6 boys and 2 girls).

**Spider:** The second word in the table is ‘spider’. Thirteen students out of 18 pronounced this word correctly. Of these 13 students 3 were boys and 6 were girls with CD. Four boys had the lyrics and 1 girl who had the text did not want to answer. Five other students pronounced this word incorrectly. 3 of them (2 boys and 1 girl) listened to the CD and 2 boys had the text. The vowel pronunciation these pupils used was [spɪdər] instead of [spɑɪdər].

**Cow:** The third word in the table is ‘cow’. Eight students pronounce this word correctly. From these 8 pupils, 3 girls and 3 boys who listened to the song were correct. Also 2 boys pronounced the word correctly through reading the text. Two of the students did not mention the word cow at all and the other 8 students pronounced the word wrongly. From these 8 students, 3 boys and 3 girls had the text and 2 girls had the CD. They pronounced the word as [ku:] the Swedish version instead of [kæʊ] for the vowel sounds.

**Bird:** The last word mentioned in the table is ‘bird’. Eleven students out of 19 pronounced it correctly and 8 others were incorrect. From those 11 students, 6 of them were those who listened to the CD (2 boys and 4 girls). One of the boys who had the CD was shy or did not remember the song and he was asked to read the underlined words. Five of the students had the text (3 boys and 2 girls). Eight pupils were not correct in pronouncing this word. Four were those who listened to the song (2 boys, 2 girls) and 4 pupils had the text (3 boys and one girl). The incorrect phonetics that they used for this word was [bɪərd] instead of [bɜ:d] for the vowel sounds according to different phonetic transcriptions.

## 4.2 Result of the Second Study

The results for the second study are shown in Table 3. Out of a total of 10 students 8 were present and the 2 were absent. So the task was divided into 8 students instead of 10 which mean 4 read the text and 4 sat in the music room and listened to the song. After fifteen minutes the questions were asked and the results are presented in Table 3.

**Table 3:** The analysis and results of the quiz

Sign +: indicates correct answer and means yes    Sign - : indicates incorrect answer and means no

Number of students	CD	Text	Gender	Don't remember anything	Correct pronunciation of dog	Correct pronunciation of spider	Correct pronunciation of cow	Correct pronunciation of bird	Come for the quiz	Like or dislike music
1	+	-	G	+	+	+	+	+	+	+
2	+	-	B	+	+	+	+	+	+	+
3	+	-	B	Shy	+	-	-	-	+	Did not know
4	+	-	G	+	+	+	+	+	+	+
5	-	+	B	+	-	-	-	-	+	-
6	-	+	G	-	-	+	+	-	+	Hard to read
7	-	+	G	+	+	-	-	+	+	Did not know
8	-	+	G	-	-	+	-	-	+	+
9	-	-	-	+	-	-	-	-	-	-
10	-	-	-	+	-	-	-	-	-	-

**Dog:** Five students out of 8 pronounced the word correctly, 2 girls and 2 boys pronounced the word correctly by listening to the live song and 1 girl who read the text pronounced the words correctly. The next 3 pupils did not have a correct pronunciation of the words like [dɔ:g]. All of them had a text and no one from the listening group was wrong in pronouncing the words. 2 girls and 1 boy who had a text did not pronounce this word correctly. The wrong pronunciation of the word was [dog] as it was experienced in the first method.

**Spider:** Five pupils pronounced this word correctly as [spaidə]. Three girls and 1 boy listened to the live song and girl who had a text. Three other students pronounced it incorrectly. One boy with CD and 2 others with text (1 boy and 1 girl) pronounced the word incorrectly.

**Cow:** There were 4 out of total of 8 pupils who pronounced this word correctly as [kæʊ]. Three of these were those who listened to the live song (2 girls and 1 boy) and 1 girl who had the text.

Four other students pronounced the word incorrectly. One boy who listened to the live version of the song and 2 girls and 1 boy who read the text were incorrectly.

**Bird:** Four of the students said this word correctly as [bɜ:d] (Transcription used: <http://upodn.com/phon.asp>). Two girls and 1 boy who listened to the live song and 1 girl who had a text were correct in pronouncing this word. Four other students pronounced the word wrong. One boy who listened to the live song and 2 girls and 1 boy who had a text pronounced the word incorrectly.

**Table 4:** short and complete sum of the results in the second method, using instrument and singing in the class

Correct pronunciation for dog	Correct pronunciation for spider	Correct pronunciation for cow	Correct pronunciation for bird
5(2girls, 2boys, live), (1girl, text)	5(3girls, 1 boy, live), (1 girl, text)	4(2girls, 1boy, live),(1 girl, text)	4(2girls, 1boy, Live),(1boy, text)
Incorrect pronunciation for dog	Incorrect pronunciation spider	Incorrect pronunciation for cow	Incorrect pronunciation for bird
3(2girls, 1boy, text)	3(1boy, live),(1girl,1boy, text)	4(1boy, live),(2girls, 1boy, text)	4(1boy, live),(2girls,1boy, text)

The results of the study in relation to the research questions are defined as pronunciation results comparing the CD version and the text version. According to Tables 1 and 3, more correct or positive answers are achieved in pronunciation and motivation questions in the second method by comparing both methods. Having a correct form of pronunciation can be achieved better through live songs rather than listening to the CD or reading the lyrics. However, both studies have some advantages and disadvantages which will be discussed in part 4.7 in this paper.

### 4.3 Pronunciation results comparing CD version and the text/ live version and the text

As is shown in the tables, there are some correct and incorrect pronunciations of each word. In spite of the limited time for the quiz and the lack of interaction, most of the questions were asked and some relatively reliable results were achieved in this part. Those who listened to the CD made fewer mistakes than those who had to read the text and those who read the text were more bored and stressed of answering the questions. In the second study, pupils were more eager and motivated to listen to the song. Those who had the text outside the music room tried to listen and were unhappy to be chosen in the second group to read the lyrics.

All pupils who pronounced the animal words incorrectly exhibited the same mistakes in their pronunciation. They all used their native Swedish vowels for English vowels. In other words, they all tried the top-down process for pronouncing each word even though they pronounced them hesitantly such as using [u] instead of [au] for the word *cow*, pronouncing the word *dog* as

[dɒg] instead of [dɔg], pronouncing the vowel alphabet of the word *spider* as [i:] instead of [aɪ] and they have incorrectly used [ɪə] for the vowel alphabets of the word *bird* instead of [ə]. (Transcription used: <http://upodn.com/phon.asp>).

#### **4.4 Memory results comparing CD and the text/ live version and the text**

Since the time was short for pupils to practice and interact with the examiner, the memory test was not satisfactory. The pupils had just two days of practicing and they needed to study the song for just 15 minutes each day in order not to spoil their interest and avoid any stress. Hence, they were mostly asked to read the underlined words to guess the right pronunciations. However, there were just six pupils out of the twenty seven attendances who stated that they could not remember any words or were shy or scared to answer. The remaining twenty seven pupils remembered some words. Most of the children who remembered the correct form of the words better, were those who listened to the live version of the song. Surprisingly, there were also good results for those who had the text. Since the lyrics were in colored form, some of the students could remember some words. All of the new animal names, marked to draw the children's attention to the repeated words and that helped the children remember the listed words (Appendix I).

#### **4.5 Gender and age results comparing CD/text & live version with the text**

Most of the girls between the ages 8 to 10 were better at learning the second language through listening to the song than boys at the same age. Most of the girls were more interested than most of the boys to listen to the live version of the songs and they were more likely to follow the singer and be more enthusiastic about listening. Surprisingly, the boys were shyer compared to the girls and they avoided answering the questions more than the girls. The boys were better at reading the text rather than listening to the song. Age plays an important role in learning the pronunciation of L2. Different ages bring different motivation referring to children's culture, and the society's where they live in. They have different cognitive development, intelligence and speed to learn the second language. Different motivation also depends on the children's different level of maturity. It is important to consider how much the first language is completed and can affect L2 in different ages.

#### **4.6 Singing results (Second method) - comparing live version and the text**

As was predicted the results of second method were more satisfying than those of the first method. It would be a good idea to re-exam children's memory in the second study after a longer

period of time. Since this method was done for 15 minutes, pupils perhaps used their short term memory to memorize the new words in the second language. If the children were asked to say the words again after several days, they would perhaps not be able to remember them unless they heard the song more times and save the information in their long term memory. Moreover, using the guitar as a musical accompaniment helps the pupils to pay more attention and learn the song better and sooner because they showed their interests more than the first method and the results of the second method was better than the first one.

#### **4.7 Comparing two methods**

Both methods have some advantages and disadvantages in learning L2. For example, in the first method interaction between the children and the researcher was very difficult and they were not familiar with the researcher. On the other hand pupils did not listen to the CD carefully or some of them did not listen at all due to shortage of time, parent's absence etc. They did not really take the quiz seriously and some of the children did not read the lyrics. On the other hand, they had two days and 15 minutes each to listen to the song or read the lyrics and the repetitive way of practicing may have helped them to memorize words better. But in the second experiment setting, those children who had the lyrics outside of the music room did not really have much time to practice the words and read through the story. Some of them could not even read the English words. However, those who listened to the live version of the song were very interested. The examiner and the pupils both tried to interact by singing and having eye contact. The first and the second time the song was played, the children could not repeat the words, but finally there were some children who liked the song and did sing some words. However, one of the disadvantages of this method comparing to the first method is having shorter period of time to practice. The children probably held the words in their mind temporarily.

To keep the words in the long term memory different factors should be mentioned such as condition of learning, the way of practicing words, motivation, effort and some other issues (Baddedly, 1992). Children should work on their working memory and episodic memory by repeating and practicing new words to activate their long-term memory. Baddedly (1992) believes that we should investigate different ways to affect learning process in which working memory impact the long-term memory and vice versa (Baddedly, 1992).

## 5. Final review and further research

It is always hard to draw definite conclusions about learning L2 for young and adult learners. Different factors as age, gender, motivation, cognitive development and the neurolinguistic process of the brain, affect the learning process of language through songs or lyrics. The possible conclusions are as follows:

### Conclusions

- Motivation is one of the key factors to learn L2 which depends on children's motivational orientations, age, gender and their linguistic backgrounds.
- Most of the pupils used the top-down process to learn and guess the phonetics.
- Inter-language theory provides help for the learners depend on learner's cognitive development.
- Time, attention, repeating, desire and effort are factors which are needed to help learners keep the information in their long-term memory.
- Different ages bring different motivation to learn a new language depend on learner's brain functioning and their cognitive development.
- Language learning through lyrics uses the left hemisphere and it uses the right hemisphere through music.
- The age distance of the pupils between 7 and 10 years old does not make any significant difference in learning the phonetics of L2 but more differences might appear by comparing the learning ability before and after puberty.
- Girls are relatively better at imitating pronunciation and more excited to learn L2 by CD and singing methods than boys.
- An appropriate music and rhymed song can positively affect the learning process.

### Experimental/Behavioral conclusions

- Good interaction in a short period of time is not usually possible between the learners and the teacher. A longer period of time is needed in order to get reliable and satisfying results.
- More flexible attitudes such as doing pantomime and movements etc. hold children's attention better while they are learning new words.

Various elements of this study show that using music and texts as tools to teach the second language can be valid and helpful for further research. Elements such as motivation can be enhanced by listening to suitable music. Motivation can also increase memory function which is an important tool in learning the second language in the classroom. There is still a lack of connection between the world of music and L2 education for children. Teachers inappropriate reactions to phonetic errors play one of the largest roles in the pupils' motivation and learning L2 (Nation, 2003). Further research can be done in order to connect children to music with a correct phonetics strategy and attitudes. It is important to analyze the crucial role of music and singing over a longer period of time in order to examine pupils memory of learning the second language compared to different strategies for different age and gender. If the students are led by inappropriate instructions or music styles and genres, they may fail in motivation and learning. However, if learners do not have any motivational orientation they will not make progress. Therefore, teachers' actions and attitudes can weaken or strengthen the affective filter and it may encourage or mislead children's learning the second language phonetics by music.

Further research could also cover how word stress, dialects and accents can be learned by listening to an appropriate song. My personal experience has shown me that listening to songs had a great influence on my accent and phonetic use in ESL. On the other hand, it caused some confusion in grammar since the poetry in lyrics can vary from standard grammar. However, the language of songs or colloquial language helps social interaction. It should be pointed out that the ability to hear differences in sound and speech can be acquired by means of repetition. It can also be genetically determined to some extent. Talent, genetic factors and brain plasticity in learning the second language are the interesting and interconnected issues to study in connection with music.

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[http://198.85.71.234/austinlb/dme110/Final/bits\\_and\\_pieces/project\\_music/03%20There%20was%20an%20old%20ady%20who%20swallowed%20a%20fly.mp3](http://198.85.71.234/austinlb/dme110/Final/bits_and_pieces/project_music/03%20There%20was%20an%20old%20ady%20who%20swallowed%20a%20fly.mp3) [Retrieved: 2012-06-22]

# Appendix 1

## There Was an Old Lady Who Swallowed a Fly

**There was an old lady who swallowed a fly.**

I don't know why she swallowed the fly,

Perhaps she'll die.

**There was an old lady who swallowed a spider,**

that wriggled and wriggled and tickled inside her.

**She swallowed the spider to catch the fly.**

**But, I don't know why she swallowed the fly.**

Perhaps she'll die.

**There was an old lady who swallowed a bird.**

How absurd to swallow a bird.

**She swallowed the bird to catch the spider,**

**that wriggled and wriggled and tickled inside her.**

**She swallowed the spider to catch the fly.**

I don't know why she swallowed the fly.

Perhaps she'll die.

**There was an old lady who swallowed a cat.**

Imagine that, she swallowed a cat.

**She swallowed the cat to catch the bird.**

**She swallowed the bird to catch the spider,**

**that wriggled and wriggled and tickled inside her.**

**She swallowed the spider to catch the fly.**

**But I don't know why she swallowed the fly.**

Perhaps she'll die.

**There was an old lady who swallowed a dog.**

Oh what a hog, to swallow a dog.

She swallowed the dog to catch the cat.

She swallowed the cat, to catch the bird,

She swallowed the bird to catch the spider,

that wriggled and wriggled and tickled inside her.

She swallowed the spider to catch the fly.

But I don't know why she swallowed the fly.

Perhaps she'll die.

**There was an old lady who swallowed a cow.**

I don't know how she swallowed a cow.

She swallowed the cow to catch the dog.

She swallowed the dog, to catch the cat.

She swallowed the cat to catch the bird.

She swallowed the bird to catch the spider,

that wriggled and wriggled and tickled inside her.

She swallowed the spider to catch the fly.

But I don't know why she swallowed the fly

Perhaps she'll die.

**There was an old lady who swallowed a horse**

**She's dead of course!**

## Appendix II

### Research questions

1. How old are you?
2. Did you like the music/lyric?
3. How many animals were in the story?
4. Which animal was the first that the old lady swallowed?
5. What was the last animal that the old lady swallowed?
6. What happened at the end?
7. Is the old lady dead or alive?
8. Which animals were in the story?

The translation:

1. Hur gammal är du?
2. Gillade du musiken / texten?
3. Hur många djur var med i berättelsen?
4. Vilket djur var det första att den gamla damen svälja?
5. Vad var det sista djuret att den gamla damen svälja?

6. Vad hände på slutet?
7. Är den gamla damen död eller levande?
8. Vilka djur finns med i berättelsen?