The study was generally based on the rules of ethnographic research. Two sisters, Joanna (six years old) and Dagmara (eight years old) were observed by their mother, both of whom had access to English multimedia programs. The aim of the experiment was to find out about how children learn to play with multimedia written in a foreign language. It is important to remember that the children focused on playing and solving language problems rather than learning English.

The two girls were using software containing English science vocabulary on an elementary level. This experiment set out to address (1) what level of English proficiency the children gained during that interaction with multimedia, (2) how this way of learning influenced their social interaction with their peers and, (3) how they coped with technological 'problems' they met.

The subjects learned new words and language rules and also gained some knowledge about elementary science and computers. The older girl obtained better results in learning English using the program than did the younger one.

When thinking about teaching a foreign language to children two problems seem to arise. The first is how they should be taught. The second is at what age should language classes start.

When thinking about teaching a foreign language to children two problems seem to arise. The first is how they should be taught. The second is at what age should language classes start. An attempt to answer these two questions as well as the presentation of a case study of the two young girls is described below.

The idea of using multimedia based science for learning a foreign language came mainly from our every day observations. The authors observed children and their friends while they were playing with computers or watching videos. The children easily learned new words and phrases and were very accurate in repeating them. However, when someone wanted to teach them English, problems seemed to appear, especially with learning grammar. Moreover, some reports have been collected about children whose parents emigrated from Poland. When living in an English language environment the children learned English very fast just by listening to words and repeating them. This observation gained some support from Ernst von Glasersfeld's report on his own foreign languages learning (Glasersfeld, 1996). Glasersfeld reported of his willingness and determination to learn English words his parents were using to privately discuss subjects they did not want him to listen to. Glasersfeld underlines that as a result he "felt pretty much at home in both languages" (1996, p. 2). Those languages were German and English. Moreover, he reported in his book Radical Constructivism - how language and culture environment facilitated his learning other foreign languages.

The importance of the environment in second language learning is also evident in the reports prepared by teachers in England teaching Pakistani children. It was noticed that those children usually had more language difficulties with English when their parents did not speak English and when they lived in a Pakistani community in the district or if
there was a large Pakistani community at their school. All of the above is enhanced by the idea of immersion in teaching a foreign language (Met & Galloway, 1996). Foreign language immersion means that students “acquire foreign language skills by learning at

Some evidence has been found supporting the assumption that the environment plays an important role in foreign language learning by children.

least half of their school curriculum through the medium of a foreign language” (Met & Galloway, 1996, p. 857). There are empirical evidences, which examined the efficacy of the immersion at the primary level (Day & Shapson, 1989). Harley considers affective and social variables as important environmental factors affecting the learner’s wishes to become part of the target language group (Harley, 1986). These environmental factors are a part of immersion programs.

Theoretical background for the problem follows. The main assumption in the field of teaching is that instead of focusing directly on language teaching, especially grammar rules, the focus should be on the content of the communication. Language should be the vehicle for understanding rather than the sole focus of a lesson.

It can be said that children gain language competence in their mother tongue mainly, not to say only, on the basis of conversations with their mothers and other family members. They acquire their first language in a process of communication as they try to describe and name objects they see around them, as well as by interacting with the environment they are living in. Therefore content-based learning is natural for children, especially if learning a language is considered to be a process.

Recent research on brain development shows that brain structure, i.e. the number of neuronal circles, is based on the subject’s activity. Research reports on brain functions strongly support the above argument (Greenfield, 1997). The development of the brain depends on the environment a human being is growing up in. The more difficult the circumstances in the environment are and the more tasks to be solved, the more opportunity for neuronal development arises. (Greenfield, 1997). Such learning environments can be termed educationally rich, while the opposite one is educationally poor.

The second question, usually posed when one talks about foreign language learning by children, is when to start? Again, every day experience and neuropsychology research should help in the search for an answer to this question. It is well known that when one starts learning a foreign language later in life, let say after the age of twenty, it is very difficult for him or her to achieve the pronunciation of a native speaker. We learn a language much easier when we are young. To answer the question of why this happens can be found in a study of human brain development. First there is some empirical evidence that there exists a critical period in human life for achieving certain abilities. According to Torsten Wiesel and David Hubel the ability to see and to perceive the world is gained within a limited time span (Kastory, 1997). In her book The Human Brain. A guided Tour, Susan Greenfield draws a similar conclusion. The empirical evidence presented by her comes from experiments on animals and the experience with human beings. Patricia Kohl assumes that a perceptive map of sounds is being created in a brain of an infant. The neurons are specialized “in sounds” specific for a particular language coming from the nearest surrounding. An infant gradually loses the sensitivity to those sounds which are not specific to his or her language environment. These parts of the map which are not used, i.e. the brain “spaces” responsible for sounds which are not specific for the infant environment, are going to be forgotten (Kastory, 1997).

The most effective period for language skills acquisition is the time between the second year of life and puberty (Panfield, following: Kastory, 1997). However, according to Elissa Newport, the possibility of an easy acquisition of language competence ends as early as at the age of six (Brownlee, 1998). According to Susan Greenfield this limited period contains the ideal ability to learn a foreign language as well. (see also: Kurcz, 1992)

Some evidence has been found supporting the assumption that the environment plays an important role in foreign language learning by children. Cees Koolstra and Johannes Beentjes conducted an experiment on nine and eleven year old Dutch children. The children were watching TV programs with a sound track in English and with Dutch subtitles on the screen. The authors of the experiment found that those children occasionally learned English words and phrases.

Multimedia allows children to learn by interacting with the environment. Depending on their abilities, skills, and interests pupils can choose their own level of interaction.