ROCZNIKI HUMANISTYCZNE
Tom LVII, zeszyt 5 – 2009

KATARZYNA JAWORSKA-BISKUP

THE ROLE OF FOREIGN (SECOND) LANGUAGE LEARNING IN THE DEVELOPMENT OF CONCEPT UNDERSTANDING BY CONGENITALLY BLIND CHILDREN

A CASE STUDY OF A CHILD BLIND FROM BIRTH

He who knows no foreign language
Does not truly know his own.
J.W. GOETHE

INTRODUCTION

The idea of teaching foreign languages to students with special educational needs has gained a worldwide acclaim. The benefits of knowing a second or foreign language are many and extend beyond professional angle. For a disabled person the knowledge of a foreign language offers the possibility to gain a better job and life opportunities, facilitates the access to information and communication. In addition, the process of learning a second language serves a compensatory function and contributes to a development of concept understanding. This is the case with congenitally blind children.

THE IMPACT OF THE LACK OF SIGHT ON BLIND CHILDREN'S LANGUAGE DEVELOPMENT

The children who are blind from birth experience many difficulties with mastering the meanings of concepts. The lack of sight, which is thought to be a major conveyor of data about the surrounding reality, seriously hinders

KATARZYNA JAWORSKA-BISKUP – PhD student, John Paul II Catholic University of Lublin; address for correspondence – e-mail: jaworska.k@interia.pl

language development. Sight has two major functions in a child's development: it provides information about a person 's actions and the consequences of such actions, and secondly it provides information about others and their actions. Blind children are deprived of the ability to observe and analyze their own activities in relation to other's. Consequently, they need more time and exposure to certain concepts in order to understand them.

Research into developmental psychology confirms that blind children acquire language slower. For example, Landau and Gleitman (1985) report that blind infants start uttering first words at the age of 23 and 26 moths, Norris *et al*. (1957) at 15 months, two words at 18 months and five words at 24 months, Brambring (2007) at 16 months. The norm for a sighted child is approximately 10 or 11 months. Blind children's early language is also endowed with many peculiarities that are not observable on the part of sighted children. Scholars propose a term "language egocentrism" that denotes a blind child's tendency to use words whose meanings are attached to the original context. By way of example, many blind children, when describing concepts, use their own experiences with concepts rather than general judgments. In tune with this, a comparison of the lexicon of blind and sighted children indicates a lower use of the words of general meanings and the words referring to the whole classes of designates by blind children. This may suggest that blind children show delays in the development of decentration. Perez-Pereira and Conti-Ramsden (1999) however debunk the conviction that blind children are not able to produce overextensions of concepts, and that the blind children's opportunities to generalize words are restricted owing to a limited hand-on experience. In their view, the lack of overextensions in blind children's language is not an index of impairment but a sign of few possibilities to explore environment.

Another characteristic pattern in blind children's language is the so called stereotypic speech understood as a use of phrases or units of language bound up with a concrete context. Blind children imitate not only some fixed formulae or sentences but also intonation, rhythm etc. of their parents' speech. It often happens that a child does not comprehend a certain statement but willingly uses it in everyday communication.

A vast number of psychologists write about gaps in the blind children's knowledge. This phenomenon is widely discussed in the papers of Marek (2005), Walthes (2007) or Brambring (2007). Because of an impoverished exploration of most concepts such as visual or spatial concepts blind children construct the meanings of concepts on the basis of fragmentary or in-

complete information delivered through other than sight senses as well as descriptions given by other people. Nevertheless, in many cases touch, hearing or taste are not enough to understand a concept. Verbal accounts of other people may be insufficient or unclear. Gaps in the knowledge in blind children's lexicon are manifested by questions such as "What does mould taste like?", "What is an exercise book? How can you write in an exercise book if it is a type of a book?" etc. Walthes quotes an incidence when a blind boy called Ulrich, when being given a camera, wanted to make a picture of the wind not realizing that most nature elements are invisible. The examples may be mentioned endlessly what entirely suggests how vital experience is in conceptual awareness.

In the field of psychology a notion of verbalism has set its ground. It is claimed that blind children use most words the meanings of which they do not understand. That is why the words produced by blind children are semantically empty being achieved without a solid direct sensory experience.

On the other hand, many studies prove that blind children seek many compensation mechanisms that facilitate concept development. One of such tactics is analogy. Blind children very often compare the features of objects to gain understanding of a particular item. As Grzegorzewska (1964) put it blind people live in the world of analogy. Analogy helps the blind to construct a proper mental representation of a concept. The range of touch, which is most frequently adopted, is much limited. While a blind child can examine by touch or other senses the objects of everyday use, such phenomena as nature, medical, or science concepts entail analogical explanation. Of great importance is verbal compensation. Since children with visual impairments cannot fall back on visual data language is for them a source of the knowledge about the world. Blind children acquire vocabulary mainly through verbal context and language discourse they engage in. Other people's conversations are also constructive. In similar vein, Landau analysed the use of such words as "look" and "see" by blind children and found that the children used and understood these items properly due to a reliance on syntactic information. Most studies support this finding. Wyver *et al*. (2000) did not spot any differences in terms of visual elements in the answers of blind children at the range of 3-8 years of age. In Rosel's experiment (2005) a usage of visual concepts by blind and sighted children (age 7-14) was similar. When constructing descriptions of objects and retelling stories blind children used words in fairly the same contexts as their sighted peers. Millar (1994) observed that blind children did not make more mistakes than sighted children in the task of pairing a noun

with a corresponding adjective. Blind children provided also correct aesthetic judgments in Piskorska's study (2008). The mentioned data is achieved by other scholars, for example Landau and Gleitman (1985), Perez-Pereira and Conti-Ramsden (1999) or Mikołajczak-Matyja (2008).

The lack of sight affects in a considerable way the understanding of spatial concepts. Marek (2005) noticed that the blind child had no idea of the concept of "front" and "behind", and did not know that an approaching person has a face directed forwards. Klimasiński's study (1989) showed that blind primary classroom students had problems with spatial tasks, to be more precise with basic spatial concepts such as "in front of", "at the back", "on the left", "on the right" etc. Cratty and Sams (1968) blame difficulties with understanding of the body image for problems with space comprehension. Most scholars claim that spatial concepts are so difficult to comprehend by blind children because they are purely visual concepts. It is sight that plays a basic role in examining spatial relations between objects (CUTSFORTH 1951; HATWELL 1985; HARRISON and CROW 1993). Others (BYRNE and SALTER 1983; HATWELL 1985; MILLAR 1994; WARREN 1994 etc.) state that blindness triggers self-reference a spatial organization, the ones which is centred on one's body. Hence, one may conclude that blind children exhibit disruptions in a transfer from egocentric to allocentric reference: "[…] children with visual impairments have difficulty in making the transition from the egocentric to allocentric spatial frame of reference. In encoding spatial information, they tend to persist in using strategies that involve self--reference and are slow to develop the use of an external frame of reference to encode spatial information" (WARREN 1994: 107)

From what has been said above it follows that blind children meet many obstacles on the way to concept understanding. They need much more time and opportunities to explore concepts. A major role of parents and teachers is to provide occasions of a direct sensory experience. When it is not possible blind children should be given a clear explanation of difficult concepts.

HOW DOES THE LACK OF SIGHT INFLUENCE FOREIGN LANGUAGE ACQUISITION?

Carroll (1962) distinguishes four major abilities that constitute a success in foreign language learning. Among them there are: phonetic coding ability (the ability to differentiate sounds of a language, and indentify a relation

between a letter and a sound), grammatical sensitivity (the ability to identify functions of grammatical structures), inductive ability (the ability to infer language rules) and rote learning ability (good memory). These elements are believed to decide about language aptitude. It has been debated whether blind or visually impaired children are gifted in foreign languages. Couper (1996) mentions that blind children have "a good ear" for languages. Nikolic (1986) claims that blind children's aural acuity is a crucial factor in language acquisition, and hearing is most vital in learning languages while sight plays only supportive role. Nevertheless, a sensitive hearing cannot be treated as a prerequisite of foreign language mastery. In fact, there is little research that would prove blind children's skills in phonetics. Some scholars (NIKOLIC 1986; PRING 2008) mention a well-trained memory and good concentration of blind children as crucial factors in language education. One should also add to this list a better management with distractions. Most blind children focus for a longer period on a certain task and are not distracted by any stimuli unlike their sighted counterparts. From the mentioned points one may anticipate that a blind learner may be highly successful in foreign language acquisition. The present study however draws attention to a different issue. Sparks *et al*. (1992) states that all deficits and difficulties in one's native language are always present in a foreign language. Thus, the child's problems with concept understanding (mainly specific visual and spatial concepts) and typical features of language such as egocentrism, stereotypic speech or analogical reasoning will translate into parallel foreign language difficulties.

The question which may be set however is how learning of a second language conditions a conceptual knowledge in a mother tongue? To address this hypothesis a study was conducted in the period of two years. The subject was a 14 years old congenitally blind boy. The boy took part in the English language lessons prepared on the basis of an individual curriculum. The topics of lessons included basic vocabulary: appearance and personality, weather, health, food, traveling, animals, buildings etc., grammatical aspects and phonetics exercises. Before the experiment a boy was given a questionnaire that embraced the understanding of some chosen concepts, for example nature phenomena, features of appearance etc. The boy's task was to describe briefly the words and provide examples of their usage. The results showed that the boy still exhibited many gaps in his knowledge. He did know many concepts, could not characterize them or simply described them incorrectly. By way of example, he was not able to construct a description of

his own appearance as well as his parents' (he thought that his mother was a blonde while in fact she was a brunette, his tall father was presented as a short man), he had a mistaken perception of many concepts ("all dogs are big and bulky" – a direct reference to his own Golden Retriever), and asked many questions (what does a plane look like?, what is a detached house?, is an internet café a place where you can order coffee through the internet?).

The aforementioned questions reveal that most common and straightforward for sighted people concepts were not obvious for the child. One of the most striking differences between a sighted and a blind L2 pupil is that the former comes to the class already equipped with a conceptual knowledge. A blind child, by contrast, may entail more caution from the teacher and deductive instruction.

There were also other peculiarities of the blind child's lexicon. The boy displayed a persistent egocentrism referring to his own experiences with concepts. He also tended to overuse "I", "mine" or "my" pronouns even when talking about things in general. For instance, asked to comment on the advantages of eating fruit and vegetables he emphasized that fruit and vegetables were good for him because they contained vitamins. Sometimes he transformed sentences with a wrong pronoun what changed the meaning of the whole sentence ("she hasn't got my umbrella" instead of "she hasn't got her umbrella").

Difficulties with understanding of space and spatial relations concerned the acquisition of grammar. Problems with sentence construction in a mother tongue were not visible since the child mastered the rules of syntax by hearing them in everyday speech. Deficits of this kind were visible in a foreign language. The boy had problems with transformations of sentences (affirmative sentences into negative sentences, active voice sentences into passive voice sentences etc). Problems with comprehension of grammar are surmounted by the fact that it is very hard to explain such rules to a blind child. Grammar is best acquired and understood when clearly explained. A sighted person may gain grammatical knowledge from visual presentations of the material (diagrams, time lines, tables). A blind pupil, on the other hand, has to engage his or her imagination to visualize a certain language aspect. The child committed many mistakes with prepositions of place and other words denoting spatial location. He confused such expressions as "below/above"; "over/under", "next to/in the middle" and many others.

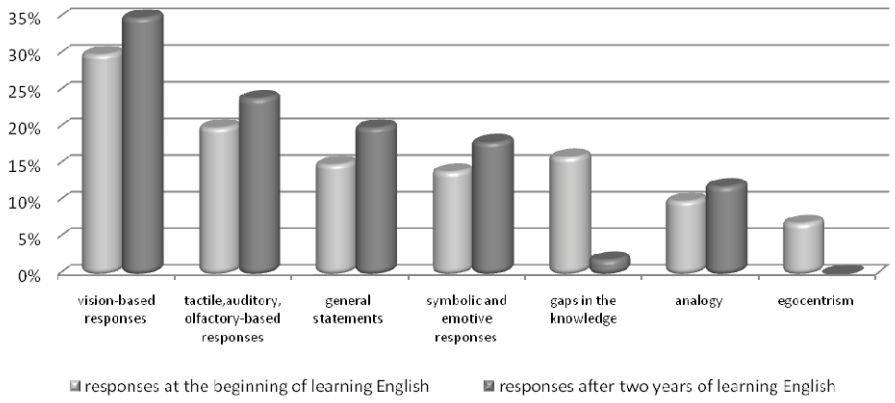
FOREIGN LANGUAGE AS A COMPENSATORY TOOL IN CONCEPTUAL DEVELOPMENT OF A BLIND CHILD

Taking as a starting point that language is for a blind child a source of information about the world one may predict that any new language should serve a stimulating role. A blind child, who has not gained understanding of most concepts, has a chance to relearn the meanings of concepts during a foreign language lesson. It is through a direct exposure to concepts in a second language that a child extends his or her knowledge about concepts in a native language. Thus both languages are complimentary. This truth is nicely presented by Vygotsky (1934) who said that "[…] the knowledge of a foreign language stands to that of a native one in the same way as knowledge of algebra stands to knowledge of arithmetic enhancing it and turning it into a concrete application of the general algebraic laws" (VYGOTSKY 1934: 152). Foreign language learning accompanies social skills such as the ability to communicate with sighted people. Blind children learning how to order food in a restaurant, buy a ticket etc. in a foreign language learn the same skills in a mother tongue. Language has thus a stimulating function. "Like no other subject, a foreign language course offers endless opportunities for including activities involving daily living skills and mobility, encouraging the children to use all of the available senses" (MAREK 1999: 1).

For the sake of clarity one should consider a definition of a concept. It is said that a concept and a word meaning are not the same units and should be treated separately. Concepts belong to a mental encyclopedia that contains person's views, experiences, notions etc. Words, by contrast, to a mental lexicon. Hence a human being develops a meaning of a certain concept which is independent from a language spoken (concepts are the same in all languages) whereas a word meaning is different in various languages. To put it simply, a word is a label for a concept. Furthermore, concepts are developed steadily when a person gains experience. According to relevance theory of Sperber and Wilson (1986) there are several entries of concepts such as: lexical, logical and encyclopedic entries. Encyclopedic entries of concepts differ in people. For example, a gardener will have more encyclopedic entries for flowers or plants as his knowledge endows him with more data about such concepts. A blind child may have fewer entries of some concepts because of a limited experience and access to concepts. That is why many blind children build their representations of concepts on the basis of one exemplar rather than classes of concepts. As it was mentioned the boy

described a dog as big and bulky using one breed of dogs, the one familiar to him – a prototype of a concept. Foreign language learning by a blind child is important because it concerns not only teaching a word meaning (the equivalent of a word in a mother tongue) but a concept. That was also the case with the blind boy of the study. Since the lessons dealt with all language skills the boy's functioning in his mother tongue greatly improved. The boy understood more concepts, got interest into new matters and his general knowledge about social issues or cultural differences between nations developed. Some of the concepts, he was not even aware of, became clear. The English language classes aimed at exercising spatial skills as well. Rhymes, songs, chants entailed bodily movements. Classes included using a tablemat, setting the table for a dinner, arranging a room for a toy puppy, searching for some hidden objects using auditory and tactile clues and drawing simple pictures on a specially designed mat. Spatial activities helped the pupil to deal with space in real life. A diagram below summarises the achievements of the boy after two years of learning English tested on the basis of a questionnaire. One can see that lessons were very beneficial. The greatest success was not only a mastery of basic vocabulary and the ability to communicate in a foreign language on a primary level but a better understanding of concepts. Gaps in the knowledge or egocentrism almost diminished and did not interfere in communication. The boy learned many new concepts, idioms, proverbs and useful phrases. The knowledge about many topics improved, which is displayed by a high number of vision-based responses, general statements and symbolic and emotive responses.

Diagram 1. Responses of a blind child before and after learning English as a foreign language.



FINAL WORD

Education of blind students should be supported. The lack of or incorrect comprehension of concepts is present in both a mother and a second tongue. Thanks to second language learning, the blind child can acquire concepts not familiar or not known at all. That is why one may say that learning a foreign language plays a compensatory role and enhances a child's cognitive and language development. A foreign language lesson gives an opportunity to teach a child many useful in everyday life skills such as communication or orientation. Finally, foreign language classes provide for the child fun and boost motivation that are equally important as other skills.

BIBLIOGRAPHIE

BRAMBRING, M. (2007). *Lehrstunden eines blinden Kindes*. München: Verlag.

BYRNE, R.W. and SALTER, E. (1983). Distances and directions in cognitive maps of the blind. *Canadian Journal of Psychology*, 31, 293-299.

CARROLL, J.B. (1962). The prediction of success in intensive foreign language training. In Glaser, R. (Ed.) *Training Research and education*. Pittsburgh: University of Pittsburgh.

CATON, H. (1977). The development and evaluation of a tactile analog to the Boehm test of basic concepts, form A. *Visual Impairment and Blindness*, 71, 382-386.

COUPER, H. (1996). Teaching modern languages to visually impaired children. *Language Learning Journal*, 13, 6-9

CRATTY, B.J. and SAMS, T.A. (1968). *The body-image of blind children*. New York: American Foundation for the Blind.

CUTSFORTH, T.D. (1951). *The blind in schools and society*. New York: American Foundation for the Blind.

GRZEGORZEWSKA, M. (1964). Zjawisko kompensacji u niewidomych i głuchych. In *Wybór Pism*. Warszawa: PWN.

HARRISON, F. and CROW, M. (1993). *Living and learning with congenitally blind children*. Canada: University of Toronto.

HATWELL, Y. (1985). *Piagetian reasoning and the blind*. New York: American Foundation for the Blind.

KLIMASIŃSKI, K. (1989). *Organizacja czynności poznawczych przy głębokim defekcie wzroku*. Kraków: UJ.

LANDAU, B. and GLEITMAN, L.R. (1985). *Language and experience. Evidence from the blind child.* London: Harvard University Press.

MAREK, B. (1999), A Blind Child in an English Language Classroom. *Network. A Journal for English Language Teacher Education*. Vol. 2 No. 1 Omnibus and The British Council.

_____. (2005). Learning from experience. Pomoce dydaktyczne i środki techniczne w nauczaniu osób niewidomych i słabowidzących. In B. Harań (Ed.) *Teaching foreign languages to disabled students*. Siedlce: Wydawnictwo Akademii Podlaskiej.

MIKOŁAJCZAK-MATYJA, N. (2008). *Hierarchiczna struktura leksykonu umysłowego. Relacje semantyczne w leksykonie widzących i niewidomych użytkowników języka*. Poznań: Wydawnictwo Naukowe UAM.

MILLAR, S. (1994). *Understanding and Representing Space*. Oxford: Oxford University Press.

NIKOLIC, T. (1986). Teaching a foreign language in schools for blind and visually impaired children. *Journal of Visual Impairment and Blindness*, 81, 62-66.

NORRIS, M., SPAULDING, P.J. and BRODIE, F.H. (1957). *Blindness in children*. Chicago: University of Chicago Press

PEREZ-PEREIRA and CONTI-RAMSDEN. (1999). *Language development and social interaction in blind children*. Hove and New York: Psychology Press.

PISKORSKA, A. (2008). Concepts reflecting aesthetic judgments in blind children. In E. MIODUSZEWSKA and A. PISKORSKA (Eds.) *Relevance Round Table*. Warszawa: Warsaw University Press.

PRING, L. (2008). Psychological characteristics of children with visual impairments: learning, memory and imagery. *British Journal of Visual Impairment* 26 (2), 159-169.

ROSEL, J. (2005). Verbalism in the narrative language of children who are blind and sighted. *Journal of Visual Impairment and Blindness*, 99, 413-425.

SPARKS, R., GANSCHOW, L., POHLMAN, J., SKINNER, S., and ARTZER, M. (1992). The effect of multisensory structured language instruction on native language and foreign language aptitude skills of at-risk high school foreign language learners. *Annals of Dyslexia*, 42, 25-53.

SPERBER, D. and WILSON D. (1986). *Relevance*. London: Basil Blackwell.

VYGOTSKY, L. (1934). *Thought and language*. Cambridge, Massachusetts, London: The MIT Press.

WALTHES, R. (2007). *Tyflopedagogika*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.

WARREN, D. (1994). *Blindness and children. An individual difference approach*. Cambridge: Cambridge University Press.

WYVER, S.R., MARKHAM R. and HLAVACEK, S. (2000). Inferences and word associations of children with visual impairments. *Journal of Visual Impairment and Blindness* 94, 204-217.

ROLA UCZENIA SIĘ JĘZYKA OBCEGO W ROZWOJU ROZUMIENIA POJĘĆ PRZEZ DZIECI NIEWIDOME
PRZYPADEK DZIECKA NIEWIDOMEGO OD URODZENIA

S t r e s z c z e n i e

Artykuł stawia sobie za cel analizę wpływu uczenia się języka obcego na kompetencje językowe w języku ojczystym. Dziecko niewidome, przyswajając język obcy, uzupełnia braki w wiedzy, rozszerza swój światopogląd oraz uczy się interakcji z rówieśnikami. Język obcy pełni zatem rolę kompensacyjną w stosunku do języka macierzystego. Źródłem powyższych hipotez jest obserwacja procesu akwizycji języka angielskiego przez dziecko niewidome od urodzenia. Opisany przypadek pokazuje, że po okresie dwóch lat bezpośredniej ekspozycji na język obcy chłopiec uzyskał lepsze wyniki w ankiecie sprawdzającej rozumienie pojęć, przede wszystkim pojęć wizualnych i przestrzennych.

Streściła Katarzyna Jaworska-Biskup

Słowa kluczowe: dzieci niewidome, edukacja dzieci niewidomych, rozumienie pojęć, akwizycja.

Key words: blind children, education of blind children, concept understanding, foreign language acquisition.