

## DEVELOPMENT OF READING LITERACY IN FOREIGN LANGUAGE AND ATTENTION DEFICIT AND HYPERACTIVITY DISORDER CHILDREN

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### Abstract

The main purpose of the article is to discuss how children with Attention Deficit and Hyperactivity Disorder (ADHD) develop reading literacy in a foreign language. Usually, foreign language methodologies and instruction in foreign language education are specifically designed for the majority of learners who have the capacities and abilities to comprehend a foreign language and learn it. The majority also masters competencies necessary for reading comprehension enhancement. However, there are learners with neurodiversity who need special attention when acquiring a foreign language. In the real school settings, very little attention is devoted to such learners. This study stands on the presumption that individual differences are a natural part of foreign language education and every single individual has specific desires and needs when foreign language learning is concerned. ADHD foreign language learners are defined as having low levels of attention, low communication skills, low literacy, and difficulties to concentrate (Hawkins, Gathercole, Astle, 2016). The research was designed as a case study of an 11 years-old English language learner diagnosed with ADHD. The article presents selected data gained from a research project that took two years of examination. Specifically, it emphasises the ability of the selected ADHD learner to devote his attention to reading in a foreign language at the English language lessons after the intervention was introduced. The first part of the article defines characteristics of ADHD learners from a neurological and psychological points of view. Then the approach we selected for the intervention was a specifically designed set of strategies grounded in the strategies of drama games, multisensory approach to teaching foreign language and Total Physical Response (TPR), all characterised as non-traditional approaches to foreign language instruction. The second part of the article presents selected research data. The case study research was conducted in an average size public school in the south of Slovakia. Based on the results we tend to have strong conviction that non-traditional classroom management together with the selected intervention approach introduced in the research study stimulated higher interest of the selected learner to read and respond to the text interactively. The tools of Grammar Test, Observation and Semi-structured interview also served to investigate the selected variables. The object of research was carefully selected and all the research data were kept fully confidential.

**Keywords:** *Foreign language education, reading comprehension, reading literacy, attention deficit and hyperactivity disorder, multisensory approach, creative drama strategies.*

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### 1. Introduction

Reading in a foreign language encompasses a wide spectrum of cognitive and metacognitive processes. Mainly they cover metalinguistic awareness, general knowledge about the theme of the text, reading strategies, working memory, attention span but also sociocultural aspects as reading habits, cultural awareness of the target language. As reading comprehension is one of the variables selected for the purpose of this research, we pay attention to the several aspects of the skill. Apparently, a great amount of attention is paid to reading comprehension because reading is one of the essential skills necessary for a successful FL learner. The current research study is a part of a wider research emphasising foreign language literacy development. The main goal of the programme was to provide a complex reading comprehension instrument how to enhance reading comprehension of FL readers in Slovakia. Furthermore, one selected part of the research was paid to the children diagnosed with ADHD (Attention Deficit Hyperactivity Disorder) and their competence of reading comprehension. The selected variables of Foreign Language Reading Comprehension and Unwanted Behaviour were selected for the purpose of this study.

Prior to the selection of the predictors the analyses of the most influential factors of text comprehension were selected. Over the course of the research the most influential appeared the factors of grammar comprehension, specifically understanding of the morphological, syntactical and lexical structures. Perception of grammatical rules the ability to work with the rules while reading appeared as the most influential predictor together with the cognitive structuration. Although we believe there are various other factors, we based our assumptions on the interaction and interrelatedness of the selected factors. Furthermore, the role of text comprehension and its relation to the perception of grammatical structures and vocabulary were researched. Regarding comprehension, we assume, it relates to knowledge and skill. As McNamara & Magliano specify, it comprises of lower level processes and higher level processes (McNamara & Magliano, 2009). Even the less proficient readers may comprehend the text on its lower levels, using text-based information, understanding the codes, memorising words, putting sentences together, and conveying the meaning. However, much complex process is acquired, for higher level reading, mainly, the process of connecting meaning, relating it to the text beyond the text, beyond the denotations, finding relationships among a variety of the concepts.

As Nuttall (2005), McNamara & Allen (2017), Adams, Bell, & Perfetti (1995), O'Reilly & McNamara (2007) share there are generally three main levels of reading, firstly it is **decoding** of the symbols, **understanding** the meaning and **connecting** the meaning with the personal knowledge and life experience. Regarding ADHD learners the main problematic areas of reading in a foreign language are *decoding*, *encoding*, low level of understanding *polysemy*, *syntax*, *semantic* and *pragmatic* character of texts. Their knowledge of lexis is low and they lack the ability to relate previous knowledge with the information from the text. Thus, it is essential to develop metacognitive strategies of ADHD learners, such as the capacity to self monitor, self assess, self-evaluate in order to be able to correct oneself or apply a different strategy for comprehension of the text (Clay, M. 2015). As several other writers claim metacognitive processes are far more important than explicit recognition of the words and is necessary for both, the beginner reader or the accomplished reader.

## 2. Objectives and methods

The main purpose of the research was to find out how the intervention techniques based on the Multisensory approach, Creative drama, Total Physical Response method, and Experiential learning affect development of reading comprehension of an ADHD language learner. The subject of the case study was an 11 years old boy learning English as a foreign language for 4 years in a public school (south of Slovakia). Out of the interest in the impact of the intervention on the selected boy, the following research questions were formulated: Research question 1: *What is the impact of the intervention techniques on the competence of reading comprehension of the selected ADHD learner?* Research question 2: *What is the impact of the intervention techniques on the behavior of the selected ADHD learner?* The research has been of a longitudinal character, thus the research study displays partial results.

The variables of *Foreign Language Reading Comprehension* and *Unwanted behavior* were tested by the method of Reading Comprehension test consisting of grammar structures, reading of a text, matching the meaning. The selected learner was exposed to the intervention rooted in the multisensory approach and the strategies of creative drama and TPR. The intervention took 5 months, once a week. The validity was verified by triangulation of methods (observation, grammar/reading test, unstructured interview).

### 2.1. Intervention

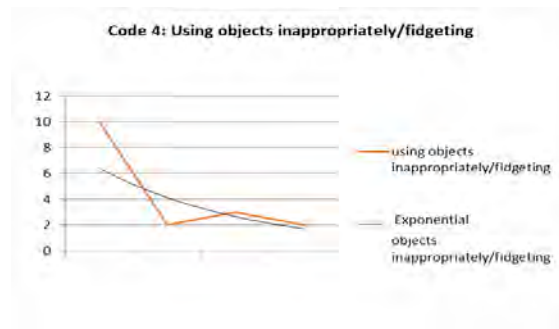
Although the selected ADHD learner was a part of the inclusive class, the intervention we designed reflected his needs. Every intervention unit was divided into 3 main phases: 1. Introductory (Warm-up), 2. Main part (In-reading phase), 3. Calm-down (Post-reading activities). The grounds of the intervention lesson design emphasized the variables related to language improvement in all its forms including oral speech, reading comprehension, listening, and eliminating those variables that inhibit foreign language performance of ADHD learners. The structure of each unit developed gradually applying lower cognitive processes to higher cognitive processes. Moreover, we paid a considerable amount of attention to metacognitive processes.

## 3. Case study research results

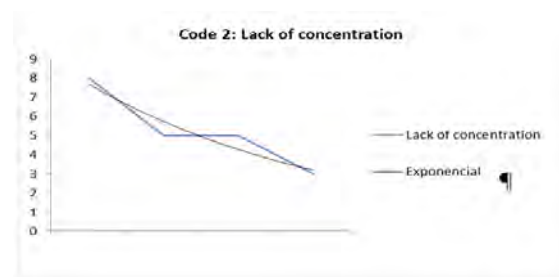
The subject of the study was an 11 years old boy diagnosed with ADHD. The school he attended was situated in a town of 25.000 inhabitants in the south of Slovakia. He had been taught English as a foreign language for 3 years. His improvement was measured by the test scores, which had increased by 15 percent in the category of Reading comprehension, 8 percent in the category of grammar and Language in Use. We are convinced that behavior of ADHD children is tightly related to their academic

results and by reducing unwanted behavior children are more willing to learn. Thus, Graph 1 and Graph 2 display the decreasing trend-lines of the selected Code 4 Using objects inappropriately/fidgeting and the Code 2 Lack of concentration. Both measured by Observation.

Graph 1. A trend-line of the Code 4 Category Unwanted behavior.



Graph 2. A trend-line of the Code 2 Category Unwanted behavior.



#### 4. Discussion and conclusion

The results show that the intervention based on the Multisensory approach, creative drama strategies and TPR had a positive impact on the ADHD learner. The grammar test results showed increase. Regarding the second research question the trend-lines of the selected Code 2 and Code 4 showed decreasing tendency of unwanted behavior of the selected learner. Although the results only represent one selected ADHD child we suggest to use the intervention

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