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FOREIGN LANGUAGE TEACHING METHOD RELEVANT TO DYSLEXIC STUDENTS: A MIXED METHODS STUDY

DİSLEKSİ ÖĞRENCİLERİNE İLİŞKİN YABANCI DİL ÖĞRETİM YÖNTEMİ: BİR KARMA YÖNTEM ÇALIŞMASI

Bogusława GOSIEWSKA TUREK¹

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Abstract

The aim of this study is to investigate the relationship between teaching instruction applied in teaching a foreign language to dyslexic students and their language achievement. The author of the study attempts to explore methods relevant for teaching foreign language to dyslexic students and whether foreign language teachers should provide teaching methods designed specifically for dyslexic students. The researcher applied a mixed method: quantitative combined with qualitative. The data was collected through online questionnaires comprising closed and open-ended questions filled out by parents of dyslexic students and English teachers. According to the research results, foreign language teaching methods offered in Polish public schools are not relevant to dyslexic students. Therefore, foreign language teachers should provide foreign language instruction appropriate for the needs of dyslexic students.

Key Words: Foreign language, second language acquisition, dyslexia, teaching method.

Özet

Bu çalışmanın amacı disleksi öğrencilerine yabancı dil öğretiminde uygulanan öğretim yöntemiyle bu öğrencilerin dil başarıları arasındaki ilişkiyi incelemektir. Araştırmacı disleksi öğrencilerine yabancı dil öğretimi ile ilgili yöntemleri ve yabancı dil öğretmenlerinin disleksi öğrencileri için özel tasarlanmış öğretim yöntemleri sağlayıp sağlamadığını irdelemektedir. Araştırmacı çalışmasında karma yöntem (nicel ve nitel birleştirilmiş) kullanmıştır. Veriler, disleksi öğrencilerinin ebeveynleri ve İngilizce öğretmenleri tarafından doldurulmuş kapalı ve açık uçlu sorularla çevrimiçi anketler yoluyla toplanmıştır. Araştırma sonuçlarına göre, Polonya devlet okullarında sunulan yabancı dil öğretim yöntemleri disleksi öğrencilerine yönelik değildir. Bu nedenle, yabancı dil öğretmenleri disleksi öğrencilerinin ihtiyaçlarına uygun yabancı dil eğitimi sağlamalıdır.

Anahtar Kelimeler: Yabancı dil, ikinci dil edinimi, disleksi, öğretim yöntemi.

1. Introduction

Foreign language learning is an essential part of the school curriculum in the Polish education system, and students with dyslexia are integrated into traditional classes. As they frequently face difficulties in learning, some educators claim that they should be excluded from foreign language instruction. However, there are also opinions that dyslexics can benefit from foreign language learning but in a proper learning environment (The International Dyslexia Association, 2010) as true inclusion is "about feeling accepted and involved in a worldwide learning experience" (The British Dyslexia Association, 2015).

1.1. Dyslexia, definitions symptoms, and identification

It is essential to be aware of the fact that dyslexia is of neurobiological origin and cannot be cured. Also, dyslexia has no relation to intelligence or intellectual abilities. The definition presented by the International Dyslexia Association encompasses all the vital factors related to dyslexia. They define dyslexia taking into account biological, behavioral, cognitive, and environmental levels.

"Dyslexia is a specific learning disability in origin (biological level) which is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities (behavioral level). These difficulties typically result from a deficit in the phonological component of a language that is unexpected in relation to other cognitive abilities and the provision of effective classroom instruction (environmental level)" (Kormos & Smith, 2012, p.24).

The weak performance is easily noticeable in pre-school children. At this stage, the risk of dyslexia can be observed in delayed development of speech, poor phonological or motor skills, and subsequently learning difficulties can be predicted (Bogdanowicz, 2002).

Dyslexia is mostly a hereditary impairment where children usually come from ancestors experiencing speech delay or developmental disorders. Moreover, children from pathological pregnancy are also at risk of dyslexia. These children frequently do not show any warning signs of impairment at the early stages of development. However, once they are faced with formal instructions, they can encounter difficulties in literacy and learning. Learning problems occur despite their average intelligence, good hearing, and supportive learning conditions (Bogdanowicz, 2002).

The main characteristic of children being at risk of dyslexia is poor automatization of motor skills. The lack of a crawling stage, awkwardness in catching, keeping balance, kicking or throwing a ball, bumping into people or objects, difficulties while learning how to swim, ride a bike or dance manifest in children being at risk of dyslexia. These difficulties may subside in relation to orientation-based commands such as up/down, forward/backward or at the front/ behind. Delayed development of motor skills causes poor dexterity in everyday activities such as dressing up (Nijakowska, 2010).

Moreover, dyslexia results in the poor quality of paintings or drawings and mirror writing. Also, children at risk of dyslexia struggle to remember the letters of the alphabet or to

recognize similar shapes (geometric figures, or letters such as p and b or m and n) (Nijakowska, 2007). They are also frequently affected by problems with coordination and proprioception as well as time recognition (yesterday, today, tomorrow) (Nijakowska, 2010).

The primary sign of reading impairment are problems with decoding single words. Children who are at risk of dyslexia reveal delayed or distorted phonological development, also visible in non-word processing exercises. It can be concluded that these children are unable to form phonological representations before they receive reading instructions. This impairment results in difficulties in mapping orthography on phonology (Snowling, 2000).

Language difficulties can be experienced differently, for instance in delayed speech development, word-naming difficulties, jumbling words, word mispronunciations, problems with alliteration and rhyming as well as improper use of syntax visible in wrong word order or incorrect grammatical forms. Furthermore, children at risk of dyslexia encounter problems with sound discrimination, blending, and sequencing, difficulties in memorization of nursery rhymes, songs, or difficulties with repeating messages or acting according to instructions. (Nijakowska, 2010).

Regarding spelling, students who are at risk of dyslexia make mistakes in rewriting and dictation. They find it hard to memorize and discriminate language sounds and letters (their graphic symbols). Occasionally, they apply mirror images of letters, their handwriting is awkward or they write in the reverse direction. Mistakes which are made by dyslexic learners in spelling and reading are omission, insertion, rotation, displacement, reversal condensation, substitution, and guessing (Kaja, 2001).

Spelling difficulties are noticeable, firstly in childhood, and then in adolescence and adulthood, regardless of the knowledge of orthographic rules. Thus, they exist even when an adult becomes a fluent reader. If such spelling and reading difficulties are not discovered and remedied by pedagogical intervention at an early stage, they can lead to overall learning difficulties. Also, educational progress might be hindered by reading problems. Weak readers may be deprived of wide access to information related to scientific disciplines, and even everyday life (Bogdanowicz, 1999).

It is crucial to discover early that a child is at risk of dyslexia, which firstly depends on parents' and teachers' sensitivity to early symptoms of developmental problems. Obviously, early detection of warning signs of dyslexia results not only in the limitation of learning difficulties but also of emotional problems experienced by many dyslexic students. Disclosure of learning difficulties can possibly be the result of the employment of the Dyslexia Early Screening Test (DEST) developed by Nicolson and Fawcett (Ott, 1997). It can be suggested by teachers or other school professionals at the onset of primary school education as it provides information about children's strengths.

The corresponding diagnosis which is the Scale of the Risk for Dyslexia (SRD) may be applied to assess the risk of the occurrence of specific disorders in reading and writing (Bogdanowicz, 2002). This scale applies to 6 and 7-year-olds and its main objective is to find psychomotor delays which are essential in providing early reading and writing skills assessment. It takes the form of a questionnaire that is filled out by teachers and parents. Nevertheless, it should be noted that both screening methods are error-burdened due to low accuracy (Lindsay, 2001).

1.2. Second language acquisition and the impact of dyslexia on second language learning

Second language acquisition (SLA) outlines how students learn a second language. SLA process describes letter-to-sound interdependence called orthographic depth. Deep orthographies denote unpredictable grapheme-phoneme correspondences, multi-letter graphemes, and frequent irregularities. On the other hand, shallow orthographies indicate simple letter-sound relations. English is a language with deep, opaque orthography. Highly transparent languages, for instance, Turkish have a one-to-one relationship in both, phonology-orthography (spelling) and orthography-phonology (reading). Conversely, English is deprived of consistency in all areas (Katz & Frost, 1992).

Higher or lower transparency and orthographic depth resulted in the formulation of the orthographic depth hypothesis This hypothesis indicates that differences in literacy learning depend on the orthography of a language. In shallow orthographies, literacy acquisition is based only on language's phonology, where readers rely primarily on the sublexical or phonological route which is a result of transparent letter-to-sound correspondence. Contrarily, in deep orthographies, the logographic strategy is necessary. (Katz & Frost, 1992).

The orthographic depth hypothesis suggests that readers depend on the whole word or phonological recognition. This theory does not indicate that different psycholinguistic units can develop with differences in orthographic systems (Ziegler & Goswami, 2006). Nevertheless, the phonological awareness of onsets, rhymes, and phonemes vary in different languages. In more transparent languages the awareness of separate phonemes is not as important in reading. On the other hand, in languages with deep orthographies the awareness of onsets and rimes is vital. The words are gathered in accordance with the sounds. Readers begin with common endings and then the words are deciphered through analogy. Therefore, the onset-rime level representation is a tool for discrimination of similar-sounding words such as *cat* and *rat* or *pen* and *ten* (Goswami, 2006).

Phonological processing abilities are the basis for word recognition across languages. Hence, phonological processing impairment in the native language is a predicator of specific learning difficulties in second language acquisition. It has been suggested that the core of the phonological deficit in dyslexia is transferred from the first language to the second language. Sparks (1995) claims that learners with difficulties in perceiving and producing phonological strings can display weak reading skills which in turn can affect their listening comprehension, speaking skills, reading comprehension, syntax, general knowledge, and verbal memory. Chodkiewicz (1986) pointed out that good readers in the first language are competent readers in the foreign language too as developing reading abilities in the first language, triggers progress in a foreign language.

1.3. Second language teaching and multisensory structured learning

Recent second language teaching theories recommend natural approaches to language learning and suggest that second language should be taught in a way the students learn their mother tongue, beginning with listening followed by speaking, reading, and writing (Krashen & Terrel, 1983). Sparks and Ganschow (1991) claim that this attitude may result in difficulties experienced by students while learning a language. Thus, Sparks, et al., (1991) suggest multisensory structured language instruction as a methodology that promotes explicit and direct teaching of the second language phonology through seeing, hearing, and doing. Moreover, contemporary pedagogy based on neuroscience perceives this method as a device accelerating retention and improving recollection of the school material (Clarke, 2006).

Samuel T. Orton (1937) investigated dyslexia and devised the multisensory teaching method. He discovered that dyslexic students can distinguish individual letters and copy three letters without mistakes but they are unable to join language symbols with the spoken language. Orton based his teaching method on children's ability to say words which they were not able to read. Children were provided with phonetic equivalents of letters and as a result, were able to produce words orally from their graphic counterparts. The kinesthetic channel was activated when the child traced words on sand according to the pattern provided by a teacher, while orally producing the word.

To avoid confusion between similar sounds such as p and b or f and t Orton suggested working based on flashcards with letters. The cards were displayed to the students and they repeated the name of a sound or letter. This method helped the students to differentiate the minimal pairs. Orton was against providing exact details for multisensory teaching as he believed that general formula cannot be applicable to all cases of dyslexia (Orton, 1937).

The Orton-Gillingham method should cover all the language skills: spoken and written communication, expressive and receptive language, phonology, grammar, and semantics. The reason for such teaching is the fact that the student should learn more than phonology. To achieve these teaching objectives and to obtain second language class integrity, certain rules must be obeyed. Firstly, the course should be taught in a second language. The native language is only used to explain grammar. Moreover, the class must be well-structured with frequent reviews and finally, it combines simultaneous writing and pronunciation to enable students to see, hear and, do the language (Sparks, et al., 1991).

With English being non-transparent language, it is difficult to teach the phonetic structure to students with dyslexia. A lesson plan should consist of the following class activities: board drills used to teach phonology and grammar, oral sound drills- to review the sounds just learned at the blackboard, grammatical concepts-taught to introduce and review the grammar, vocabulary teaching through the introduction of new words containing previously learned sounds, and reading or communicative activities that is practicing real communication in the second language (Sparks et al., 1991).

Board drills should last approximately 10-15 minutes. The teaching of phonology is realized through the following steps: the sound is pronounced by a teacher and the learners

repeat it, the teacher writes words with a new sound on the board at the same time pronouncing the words, the students repeat them, and finally, the teacher dictates the same words, and the students write them and speak simultaneously. The learners are taught only one sound a day and already learned sounds are revised frequently. Flashcards with separate sounds could be used to review the material (Sparks et al., 1991).

The subsequent activity for dyslexic students is an oral sound drill. After a board drill, the learners are seated at their desks. The main objective of this activity is to revise in a spoken and written form the sounds which had been taught in a board drill. The teacher shows the students the card with a grapheme. One of the learners says the phoneme (sound), then recalls the vocabulary with that sound. In small groups, the learners may pronounce the consonant with a few vowels, in larger groups each student can pronounce one syllable only (Sparks et al., 1991).

Multisensory teaching can also cover grammatical concepts that are taught at the board and through oral sound drills in order to reinforce second language syntax. As dyslexic students encounter difficulties learning their native language syntax, it is advisable to teach grammar explicitly, for instance, through colors. When the color rule is followed, learners will understand that a red color stands for the agents of action, blue for the action, and green expresses the object of the action (Cimermanova, 2015).

In multisensory teaching, students learn vocabulary with the employment of visuals. Dyslexic students are asked to look at the picture with a word, pronounce it, and write. Teaching vocabulary is similar to teaching sounds at the board. Firstly, the students repeat the word pronounced by the teacher. Then, the teacher produces the word and writes it on the board. At the same time, the learners pronounce and write the same word. Furthermore, the teacher can divide the word into syllables to demonstrate the sounds (Sparks et al., 1991).

To summarize, Orton-Gillingham programs have been widely accepted for over a few decades and proved to be valued by practitioners and teachers across different educational settings and ages. Also, the adaptation of the multisensory method to teaching at-risk of dyslexia students brought an improvement in both, spoken and written performance in the MLAT test (Ganshow, et al., 1998). Such a test serves as a tool for the assessment of disability for languages (Carrol, 1981). Students benefit not only from the employment of multisensory methods in learning phonology, but also in other components of language learning.

2. Methodology

This part outlines the empirical study conducted in order to investigate whether it is necessary to apply specific foreign language instruction to dyslexic students with a view to achieving maximum effectiveness. Although regulations of the Polish Ministry of Education providing the rules for assessing, classifying, promoting, and conducting exams exist, Polish legislation does not include any foreign language instruction (Tomaszewska, 2001).

The following study's data collection method is a mixed one in order to obtain both quantitative and qualitative data. The quantitative research concerns objective analysis of the

data obtained from a survey conducted among dyslexic students' parents and English teachers. The qualitative method is realized in the form of open-ended questions included in the questionnaires incorporating immeasurable research participants' perspectives with the view to reveal their opinions about teaching a foreign language to dyslexic students.

The primary objective of the study is to investigate the relationship between foreign language teaching methods and dyslexic students' achievements as well as their perception of foreign language learning. Therefore, the researcher formulated two research questions:

RQ 1. How does dyslexia affect foreign language learning in dyslexic students?

RQ 2. What educational adjustments in foreign language teachers' opinion can be undertaken to enhance foreign language achievements in dyslexic students?

2.1. Participants

For the purpose of the study, the researcher interviewed 57 dyslexic students' parents and 45 English teachers in Polish state schools with the employment of the online questionnaires. Regarding parents, the respondents were members of the Facebook group Teenagers' parents, and the teachers who filled out the questionnaires were members of the Facebook group English teachers.

2.2. Data Analysis

Firstly, the researcher analyzed the questionnaires filled in by dyslexic students' parents. The table below shows the results obtained from these questionnaires.

Table 1.

No	Question	Mean (yes answers)
1.	Did psychological-pedagogical dispensary ruled dyslexia in	91.2
	your child?	
2.	Does your child receive special educational adjustments in	68.4
	foreign language classroom?	
3.	Does your child like English language?	47.4
4.	Does your child receive exceptional treatment from foreign	10.5
	language teacher different from non-dyslexic students'	
	treatment?	
5.	Does your child feel that she/he can achieve a lot in foreign	29.8
	language learning?	
6.	Does your child think that she/he is worse foreign language	52.6
	student than non-dyslexic students?	
7.	Does your child attend additional after-school foreign	29.8

The results from parents' questionnaire

	language classes?				
8.	Do tasks offered to dyslexic students are different from	0			
	those offered to non-dyslexics?				

In order to paint the whole picture of the situation, open-ended questions were also included. The researcher asked those 10.5 % of respondents who acknowledged that their children have exceptional treatment at the foreign language classes due to dyslexia, what treatment their children receive. The parents responded that their children have easier tasks, prolonged time, and more lenient treatment at tests. Some dyslexic students can use a computer to do homework and are tested orally instead of a written form. Nevertheless, none of these steps covered exceptional teaching methods.

Moreover, the researcher asked those 52 % parents who claimed that their child feels inferior as a foreign language learner comparing to non-dyslexic students for the reason why. They responded that their dyslexic children despite the effort they put into learning (especially into writing) receive weak grades, are not able to make progress, and mistakes in their written works are underlined in red which appears to be extremely demotivating. Also, dyslexic children do not understand grammar and spelling rules, and consequently cannot keep up with the pace of learning.

The researcher also included a question in which the parents were asked how they perceive their dyslexic children as foreign language learners where the possible answers were given according to Likert scale ranging from 1 to 10 where 1 meant very weak and 10- excellent. The mean obtained from that question was 61.40 % which indicates that although parents are conscious about their dyslexic children's learning difficulties, more than half of them believe in their learning abilities. The standard deviation with the score 3.98 suggests that parents created a rather heterogeneous group.

Table 2.

The results from parents' questionnaire

No	Question	Mean	Standard Deviation
1.	How do you perceive your child as a		
	foreign language learner	61.40	3.98

Finally, in an open-ended question the parents provided their suggestions to improve their dyslexic children's foreign language learning. They responded that they would introduce different teaching methods with more conversations, less grammar, reading and writing, and the opportunity to be tested orally. There was also a parent who felt immensely disappointed with the whole curriculum.

Following the procedure, the researcher interviewed in the questionnaires 45 English teachers of whom 97% were women. The largest number of teachers were aged between 30-40 years old so it

can be concluded that the respondents were mostly experienced teachers. Only 30% of English teachers were younger than 30 years old.

Table 3.

The results from English teachers' questionnaire

No	Question	Mean (yes answers)
1.	Do you think dyslexic students need exceptional treatment	91.1
	different from this offered to non-dyslexic students?	
2.	Do you know how many dyslexic students there are in your	84.4
	foreign language classroom?	
3.	Do you know whether all of your dyslexic students have a	73.3
	statement about dyslexia from pedagogical-psychological	
	dispensary?	
4.	Did you undergo special training concerning teaching dyslexic	46.7
	students?	
5.	Do you undergo any special educational steps while teaching	62.2
	dyslexic students?	
6.	Do you conduct additional (correction-compensation) classes	11.1
	for dyslexic students?	
7.	Do you know any special foreign language teaching methods	51.1
	for dyslexic students?	
8.	Do you consider yourself as sufficiently prepared to teach	26.7
	dyslexic students?	
9.	Would you like to attend special trainings preparing to teach	88.9
	dyslexic students?	

Open-ended questions which were included in the questionnaires for English teachers enabled the researcher to gather more detailed information about teachers' perspective on teaching dyslexic students. Firstly, teachers were asked whether they are aware of the content of the statements from psychological-pedagogical dispensaries. They acknowledged that such opinions covered merely lenient treatment while grading as well as prolonged time at tests and examinations. Although teachers do not conduct additional correction-compensation classes for dyslexics, they undertake some steps while teaching them. Among these steps, in the answers to the open-ended question, the teachers enumerated: individual approach and explanation, additional time at tests, lenient treatment regarding spelling, enabling dyslexics to make more mistakes in writing, sometimes instead of written tests dyslexics are allowed to be tested orally, some of the students receive easier tests. Only one of the teachers mentioned distinctive teaching methods, which she applies, with the employment of different colors or mind maps.

When asked about methods relevant to teaching students with dyslexia, half of the teachers (51%) responded that they know such methods but vast majority of teachers specified recommendations from psychological-pedagogical dispensaries such as prolonged time during tests which they presumably perceived as those methods. However, very few teachers mentioned mnemotechnics which are widely used in teaching children with special educational needs. Being aware of the fact that teachers are not prepared to teach students with learning difficulties, English teachers stated that universities do not offer such courses, they are not provided with professional trainings and when deciding on such training they have to invest their own money. Some of the interviewed teachers stated in open-ended questions that they do not think an impairment such as dyslexia exists. Also, they claimed that they do not have enough time to deal with the problem of dyslexia, and foreign language methodology does not cover teaching students with learning difficulties.

3. Findings

In the following part of the paper, the author of the study attempted to answer research questions.

RQ 1. How does dyslexia affect foreign language learning in dyslexic students?

RQ 2. What educational steps can be undertaken to enhance foreign language achievements in dyslexic students?

From the collected data it can be concluded that dyslexia immensely affects foreign language learning. Dyslexic students experience difficulties while learning a foreign language, and therefore more than half of them perceive themselves as unsuccessful foreign language learners. Even when they put a lot of effort into the learning process, they frequently do not understand teaching material, which results in a lack of progress. Thus, dyslexics cannot keep up with the learning pace and consequently receive weak grades which seems to be extremely demotivating. Moreover, most of them are not offered additional English classes during which they could catch up with the students who are not affected by dyslexia.

As far as educational steps are concerned, based on the conducted questionnaires, it can be stated that the only adjustments which are provided for dyslexic students are those recommended by psychological-pedagogical dispensaries. They are related to evaluation that is grading, and testing through easier tasks, lenient treatment and additional time for completing tasks. Moreover, English Philology at Polish universities does not offer special educational needs methodology courses, and there is not enough sufficient training for language teachers. Thus, the teachers are not adequately prepared to teach students with learning difficulties which has been confirmed by the teachers themselves, almost three quarter of whom admitted that they are not appropriately prepared to teach students with special educational needs. However, Polish teachers (86.4%) would be willing to participate in special training providing them with professional knowledge concerning teaching dyslexic students.

This situation leads to the low self-perception of dyslexic students' foreign language achievements. Both respondent groups agree that some steps should be undertaken to offer dyslexic students education relevant to their needs. Unfortunately, foreign language teaching methods offered in Polish public schools are not applicable to students with dyslexia. Teachers themselves claim that dyslexic students need a special approach different from the methodology offered in mainstream schools. This approach should ease the learning process and enable dyslexic students to achieve success. Still, a vast majority of teachers do not offer correction-compensation classes for dyslexics, presumably for administrative reasons. Nevertheless, while half of the teachers do not know the methodology for teaching dyslexics, almost 90 % of the interviewed teachers are open to additional training. However, currently almost 40 % of them do not undertake any specific steps while teaching which can also be linked to the lack of training.

Therefore, it can be concluded from parents' and teachers' questionnaires that children with learning difficulties need teaching methods distant from those provided to non-dyslexic students. Only exclusive teaching instruction with a methodology designed for students with reading, writing, and spelling difficulties can enable dyslexic students achieve success in foreign language learning. A method which falls under the scope of these requirements is multisensory instruction. This teaching method could be applied in teaching dyslexic students in Polish public schools. Scholars' assumption about applicability of this method to teaching dyslexics has been confirmed by the other researchers (Nijakowska, 2008; Sparks et al, 1992).

Nevertheless, the following study has certain limitations to be addressed. The necessity of the employment of an exclusive teaching method is undisputable, and the multisensory method is the most common approach. However, it would be relevant to examine it in a separate study, whether multisensory teaching proves to be successful in teaching Polish dyslexic students. Also, the number of subjects cannot be sufficient enough to present reliable data. The researcher conducted the study on 57 parents of dyslexic students and 45 English teachers; thus, the research results can be treated as assumptions, rather than facts applicable to the majority of parents and teachers. Moreover, the number of other studies validating the requirements of the employment of multisensory instruction is limited. Hence, to assess the necessity of the alternative teaching method in teaching a foreign

language to dyslexic students, it would be relevant to conduct another study focused on multisensory method, and on a larger sample of participants.

4. Discussion and Conclusion

In order to demonstrate the utility of multisensory teaching foreign language to dyslexic students, it is relevant to indicate some researches in the field. The analysis of the literature, concerning Orton-Gillingham and Orton-Gillingham based reading, conducted by Ritchey and Goeke (2006) proved the effectiveness of these methods. Orton-Gillingham based instruction results in positive outcomes concerning spelling, word reading, word decoding, and comprehension. It has been also revealed that Orton Gillingham instruction is a useful method in different settings, age groups, and populations.

Sparks, et al., (1992) conducted a research in which they investigated pre and post-test scores on native language and foreign language aptitude tests of three groups of students with learning difficulties, particularly phonological processing problems. The first group was taught Spanish and English, according to multisensory language instruction, the second group learned only Spanish according to multisensory instruction, and the latter was not taught with multisensory instruction. The research results showed that that remarkable achievement was made in the first and second group on native as well as foreign language phonology, vocabulary and verbal memory. On the other hand, no significant improvement has been made in students taught without multisensory language instruction.

The subsequent study was performed by Nijakowska (2008) who divided the participants into three groups: an experimental group consisting of five students diagnosed with dyslexia, and two control groups: ten students diagnosed with dyslexia and the other ten students without developmental dyslexia. The researcher provided the experimental group with multisensory structured foreign learning treatment, whereas control groups were taught a foreign language with the use of the other methods. The researcher firstly conducted pre-tests in all of the groups covering: reading aloud, reading silently with comprehension, listening comprehension, speaking, written assignments, pronunciation, vocabulary, spelling, and grammar. In the pre-test students scored low in all the groups. However, non-dyslexic students performed better in spelling and reading than their dyslexic colleagues. Teaching the experimental group of dyslexic students with the multisensory foreign language instruction, showed that in the post-test the experimental group performed considerably better than both dyslexic and non-dyslexic control groups taught traditionally.

However, it should be mentioned that some studies showed the lack of essential differences between the Orton-Gillingham program and the other alternative programs. According to Wearemouth and Reid (2008), multisensory structured instruction is deprived of elements essential in learning and teaching. These are factors such as metacognition, learning styles, and reasoning abilities.

Therefore, it could be concluded that the majority of research findings support the potential of an exclusive foreign language teaching method regarding teaching at-risk of dyslexia as well as dyslexic students. Also, the author of the following study attempted to verify an exceptional approach towards dyslexic students learning a foreign language.

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