

# Intervention Program for the Development of Written Expression in a High School Student Diagnosed with Specific Learning Disorder

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## Abstract

This quantitative educational research aims to investigate the difficulties of Written Expression in a High School student with Specific Learning Disorder and propose an Intervention Program for the development of Written Expression. The objective is to examine whether this intervention will improve the student's Written Expression, in order to propose an effective intervention method that can be used in other learners with learning difficulties.

## Keywords

Intervention Program, Specific Learning Disorder, Written Expression

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## 1. Introduction

Written Expression is undoubtedly of great importance, not only as a form of expression, but also as a means of communication. That means that the lack of knowledge on that matter may have negative consequences for both the academic and social integration of the individual, as well as in their psychology and in the development of their personality. This affects mostly individuals with learning difficulties, as for them Written Expression is a tough and complicated process and as a result their effective function within the school is hampered.

In recent years, multitude of surveys has been carried out regarding cognitive processes required for written language production. Thus, on the basis of these investigations, various teaching models and practices were created and proposed, with a view to enhancing the production of written language to pupils that face difficulties in this area, and are proved to be useful and effective in improving the children's literary abilities and are used in both special education

and by teachers within the school.

However, in our country there is no such intensive research in this area, and even teaching practices that have proved to be effective are often ignored by modern education or considered to be inadequate.

Aiming to investigate teaching practices in the field of written discourse, this research examines the issue of difficulties in Written Expression of a high school student with specific learning disorder and proposes an intervention program for the development of Written Expression. The objective is to find whether this intervention will improve the Written Expression of the student, so as to propose an effective intervention method that can be used in other learners with learning difficulties.

There were some main areas of Written Expression that were investigated and also set as goals to improve. Those have to do with the line of reasoning, with grammatical and syntactical rules, with the enrichment of vocabulary, with spelling and finally with text development and elaboration.

## 2. Theoretical Background

A great deal of research has been conducted recently concerning learning difficulties and their cause, their diagnoses, the criteria of appraisal and the ways of prevention and intervention on specific learning difficulties, particularly on Dyslexia.

A definition that is mostly accepted by a large group of specialists is by the National Joint Committee on Learning Disabilities: “Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical skills. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviours, social perception, and social interaction may exist with learning disabilities but do not, by themselves, constitute a learning disability. Although learning disabilities may occur concomitantly with other disabilities (e.g., sensory impairment, mental retardation, serious emotional disturbance), or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences” [1].

In general, what could be noted for all the aforementioned definitions is there is asymmetry and disproportion between the capacities of individuals as well as variance or incompatibility between skill and performance [2].

The causes of learning difficulties are still unclear. Various mechanisms are considered to be responsible for their occurrence. To date, it is considered that they may have to do with the prenatal period, the perinatal period, the postnatal period, with Neurobiological factors, hereditary factors, as well as in environmental factors.

The learning difficulty that has been studied the most is dyslexia, a term that is often used in synonymy with the term “specific learning disorder”, including

dyscalculia and dysgraphia. Over the years, there have been many definitions to describe dyslexia, some characteristics of which have changed over the years, while others remain the same. These characteristics are neuropsychological, may involve psychological procedures, academic performance, language, cognitive development, as well as other distinctive elements [3]. There does not seem to be homogeneity in the symptomatology from person to person. Therefore, the existence of a single definition is not feasible, something that justifies the existence of different approaches in bibliography throughout the years [4]. According to DSM-5 [5], Specific Learning Disorder is a type of Neurodevelopmental Disorder that impedes the ability to learn or use specific academic skills, such as reading, writing, or arithmetic, which serve as the foundation for other academic learning.

It is not clear whether the causality of dyslexia comes from hereditary factors. Studies show that it has to do with a malfunction in the certain areas of the brain. So, over time, various theories concerning the causality of dyslexia have been developed. According to the main developed theories, dyslexia could be a result of neurological underperformance, incomplete semi-spherical dominance, functional anomalies in perceptual and cognitive processing, or in genetic abnormalities.

Children with dyslexia can showcase symptoms in their reading, writing and spelling skills, or even in their behaviour.

What reading concerns, there is usually a slow pace of reading, mirroring of syllables, difficulty in discerning different words that consist of the same letters, as well as reading more complex words. Continuity in the text is hard to be kept by children with dyslexia, thus leading to a poor reading comprehension and understanding of the text [6]. According to surveys, a great number of children with Dyslexia (almost 80%) have issues with decoding texts and therefore understanding them [7]. Comprehension difficulties are often connected to other limitations those students have, like concentration and memory [8].

In writing and spelling a messy and illegible way of writing is often observed. Furthermore, mirror writing is often observed, substitution, omission or even swapping of letters, as well as a lot of spelling mistakes. Children are often reluctant to write, while their scripts often contain scribbles and smudges. Finally, there is a great difficulty in expressing their thoughts in written form [5], which is something most children with dyslexia face as a difficulty [9].

Finally, we will refer to the characteristics of children with dyslexia concerning their behaviour. Difficulties are observed in the distinction of left and right, in the perception of succession, order, direction and early numeracy skills [10]. Moreover, deficits occur in short and long term memory. There is also frequently confusion in the perception of time. In addition, these children are often unable to concentrate, while hyperactivity and kinetic awkwardness are usually common. Disorder and clutter in their notebooks and bags is a common occurrence. Finally, it is noticed that these children often have low self-esteem [5].

It is often reported that there are different cognitive factors affecting the Written

Expression of a person with a specific learning disorder. These are the memory speed, the volume of data stored in the short term memory, the quantity as well as the nature of the information of attention required, and also the ability of the writer to focus on important issues needed during the process of writing [11].

All the above affect the demanding function that Written Expression needs. Each student, in order to produce a well structured and meaningful text, should combine the role of the author-creator and of the secretary-scribe. Children with dyslexia face difficulty in handling this binary role of the creator and the scribe at the same time.

Students with dyslexia often find Written Expression as an extremely difficult process. They encounter difficulties in various requirements of the written word, while weaknesses are observed at higher levels of cognitive processes, such as targeting, writing to the point, the organization of their texts, evaluation, as well as maintaining self-regulatory strategies when writing. Spelling is also a main area of difficulty in children with dyslexia. The mistakes they make may not differ to mistakes other children make, however they make mistakes that younger children usually make. Intervention in spelling is usually proven to be effective, though, especially when combined with phonological awareness exercises.

Therefore, after studying the main areas of difficulties in children with Specific Learning Disorder, the presented intervention was designed and tested.

### **3. Methodology**

The specific research is an educational research, for the purpose of which qualitative research was chosen, as the aim is an in-depth investigation of the success of the intervention, while at the same time providing flexibility in the research process.

The research consisted of a four-week intervention program, from 10/2/2019 to 10/3/2019. Four sessions took place on a weekly basis with the aim to develop the Written Expression of the student with Specific Learning Disorder.

The research sample was determined through convenience sampling, meaning that the closest and most approachable people to the researcher were chosen. Those consisted of 5 people, the student with Specific Learning Disorder, two people from the Special Education Centre both the student and the researcher attend, the student's mother, as well as his philologist from school.

The first step was to have an interview with his mother, so as to collect information on his background, as well as his performance in school. After the four week intervention it was important to also conduct interviews with his special education teacher and his speech therapist, as well as his philologist in school, so as to ascertain the results of the intervention.

#### **3.1. Research Tools**

##### **3.1.1. Pre-Test, Post-Test**

The intervention program was formed by activities that use techniques for teaching the production and development of Written Expression. The proposed

activities had been taken from the bibliography, as well as the analytical school curriculum.

In order to ensure the success of the intervention program, a test was formed. The pre-test was taken by the student before the intervention, so that the main areas of difficulty can be noted. The same test was given to the student after the intervention program (post-test), so as to confirm the success of the intervention. The test was given on the appropriate time gap, in order to avoid the memory effect, meaning the student remembering the answers to the test from the pre-test.

### **3.1.2. Interview**

Another research tool is the semi-structured interview, which is typically used in qualitative research [12] [13]. Its structure is very similar to a structured interview, as both consist of predefined questions, with the difference that semi-structured interviews have more flexibility, in the sense that the questions can be modified to suit the needs of the interviewer [12]. Semi-structured interviews also allow informants the freedom to express their views in their own terms. Semi-structure interviews can provide reliable, comparable qualitative data [14].

## **3.2. Validity and Reliability**

The validity and the reliability of a research are always crucial. The validity of a research has to do with the ability of collecting data and examines how real the relation between a concept and its indicators is [15]. By reliability, we refer to the degree of consistency and stability that fall within the used research tool [16].

Reliability is achieved by using the test twice (pre-test, post-test), as well as by the fact that the activities and tools are taken from bibliography. Furthermore, in order to ascertain the results of the intervention, the method of triangulation was used, as triangulation strengthens a study by combining methods, researchers, sources of data, or theories [17]. In this particular research, a combination of sources was used, as information was taken from five different sources: the student, his mother, his philologist from school, his special education teacher, as well as his speech therapist.

## **3.3. Research Questions**

- 1) What is the effect of intervention on the argument in children with a Specific Learning Disorder?
- 2) What is the effect of intervention on following grammatical rules in texts drawn up by children with a Specific Learning Disorder?
- 3) What is the effect of intervention on following syntactical rules in texts drawn up by children with a Special Learning Disorder?
- 4) What is the effect of intervention on the enrichment of vocabulary on children with a Specific Learning Disorder?
- 5) What is the effect of intervention on spelling on children with a Specific Learning Disorder?

6) What is the effect of intervention on developing and presenting in the best way possible the theme of an essay on children with a Specific Learning Disorder?

#### 4. Intervention

After having detected the main areas of difficulty of the student, a specific intervention program was designed, for the implementation of which activities were used that were based on or taken from the bibliography. The intervention program lasted from the 10th of February until the 10th of March, and took place at the student's house. Four sessions, lasting 45 minutes each, took place each week.

It is advisable to engage the student with activities that have to do with his/her interests, so as to keep them interested in the intervention. It was common for the specific student to lose interest or quit the activity he is doing, so it was important to find a way to keep him engaged. That is why, after discussing about his interests and after personal observation, I concluded to some subject matters that would be of interest to him, such as science, the environment and archaeology, especially what has to do with ancient Egypt. It was observed that this way the student was far more concentrated and productive than usual during the intervention and he was not getting tired very easy.

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During the first week, the main concern was the familiarisation of the student with Written Expression, so the main activities had to do with reading comprehension. In the second and third week, the goal was for the student to distinguish the important information of a text and manage to write a summary of it. At the same time, reading comprehension was also still an activity of the intervention. Furthermore, we started working on some vocabulary activities, such as synonyms, antonyms and finding and explaining any unknown words on the text.

It was important to engage the student with syntactical and grammatical rules as he conducted the summaries. For that reason, I made a “table of self-correction”, which was used as a way of targeting before writing the summary, and then correcting it. In this way, the student becomes more independent, which also helps with his self-confidence, as he is the one who controls his writings and is not corrected by someone else.

From the third week on, we also started working on spelling rules, by using activities taken from the bibliography each week, specifically from a book about teaching modern Greek spelling [18], as well as some self-made ways and tricks to teach spelling rules.

Moreover, two books were used from the fourth week on that contained activities for the intervention of Written Expression. The first book contained intervention strategies and material for developing Written Expression [19]. The second book that was used contained material for understanding and producing Written Expression [20]. The texts that were chosen from the books were close to the student’s interests, so as to keep him more engaged and interested in the intervention.

At that time, we also started working on the student’s argument, as well as helping him present his ideas in the best way possible in a text. It was emphasized at this point how useful a successful intervention can be for a student with learning disabilities, not only on an educative level, but also on a psychological and emotional one. It is important to place emphasis on the emotional development of the student, as in this way, he or she will be more motivated and thus will perform better and have a constant willingness to improve.

There had to be a change in the intervention during the last two weeks. First of all, the student seemed to stress a lot when he had to write his answers or a summary directly on paper, so some time was given to him to first answer orally. This seemed to have a positive effect on the quality of his writings. Furthermore, due to the activities taking up more time than initially estimated, we changed the sessions to 3 one hour sessions each week. This helped a lot with the continuity of the intervention and also the time the student needed each time to concentrate and get familiarized with the intervention.

Following the last week of intervention, the post-test was administered to the student, which was the same as the pre-test for methodological purposes.

## 5. Results

There was a clear differentiation in most targeted areas of intervention. The only area that did not show much improvement was spelling. That is why there was not enough time for intervention in the specific area. Moreover, the student has been examined orally for most of his school years, so there was never much attention paid in spelling rules, as his parents and teachers were mostly concerned about his general abilities in Written Expression, which he would need in the future for academic and professionally. However, there was still an improve-

ment, as there was a 4% reduction of spelling errors in his post-test.

There was an improvement on the student's vocabulary, as there was an increase of words in the vocabulary activities, as well as an enrichment of vocabulary in the rest of the test. His syntax and structure of his writings were also improved. The student has attained the concept of a paragraph and can now differentiate the themes of a text.

Moreover, there is an enrichment of the student's text, as well as better arguments to support his views. His answers are more to the point and better developed. What is surprising is that his answers are shorter in words but better in context, as he used to deviate a lot from the topic, while now his answers are more specific and there is in general better continuity and structure.

After the post-test, the interviews with two people from the Special Education Centre both the student and the researcher attend, the student's mother, as well as his philologist from school were conducted. The interviews' questions were based on the same themes of the research questions, so as to better respond to them. Their perceptions also indicate the differentiation in the student's skills, as they all agree that there was improvement in the targeted areas. They based their answers on daily tasks with the student.

According to the findings of the implementation of the intervention program to a student with Specific Learning Disorder, it can be said that there can be an improvement on the Written Expression of a student with Specific Learning Disorder, when a successful program of intervention is implemented.

## 6. Discussion

First of all, the areas of difficulty in Written Expression of a student with Specific Learning Disorder were confirmed through the pre-test. These consist of spelling mistakes, reluctance to write, messy and illegible way of writing, as well as difficulties to express themselves in writing [11]. This is often due to a poor language basis, which is burdened by a poor planning of writing, effort as well as poor metacognition [21]. It was also confirmed that there is usually poor quality in the texts of students with Specific Learning Disorder. Their vocabulary is limited, there is no continuity in their texts and the topics they write about are usually poorly developed, especially factual texts, where the correct way of composing and presenting information is of great importance [22].

After the intervention, the results were promising, as the student seemed to improve in most areas of Written Expression. The least improved area was spelling. However, as mentioned above, this can be due to many reasons, for instance him being examined orally for many of his school years, so not much attention was given on spelling. Furthermore, spelling was never a request for intervention from his parents earlier, since they were advised to prioritize other areas of Written Expression, like syntax, thought development, organization and planning, which would be more useful to the student in the future. Another reason for the lack of enough improvement on this area can be that the student was

diagnosed at a fairly older age, meaning that he didn't have the chance to be given a proper intervention. It is also believed that in spelling is an area that can be slightly improved, but never fully reformed. Given the limited time frame of the intervention on the specific student, it can be said that the student could benefit significantly if the intervention program lasted more, especially if it was incorporated daily in the school's educational practices during the school year.

## 7. Limitations and Future Suggestions

Despite the research's mixed methodological approach that enabled triangulation, there were various limitations. First of all, even though this research can be very useful as a guideline to future interventions and teaching Written Expression in students with learning difficulties, the research concerned only one student, meaning that the sample-participant was fairly small to be able to generalize. Therefore, a future research including a larger number of students could be more informative.

Moreover, the results of the intervention could be better tested in the student's class in school. This was partially achieved by interviewing his philologist, however the results could be examined deeper, since a main concern of students with learning difficulties is academic success. Furthermore, since there had to be a differentiation in a limited amount of time, the texts and themes that were chosen for the intervention, despite being based on the school curriculum, were adjusted to the student's interests. Thus, it would be useful to use a larger variety of themes in the activities and different levels of difficulty, so as to find if there are any consequences on the inner validity of the results.

Another limitation in the specific research was the limited time frame, since not more data could be collected. In general, in every experimental and educational research, the systematic and repeated measurement of dependent variables is important, so as to find the effect of independent variables [12]. Therefore, more essays were needed to have a more representative sample of the student's standard performance.

Furthermore, another parameter of the limitations of this research is the person conducting it. The aim of a research is to integrate the results in the school. Thus, it would be useful that the approaches of the research are implemented from school educators, so as to further generalize and preserve the results of the intervention [23].

A useful research in the future could be to examine the perception of student regarding the writing process. It was informally noted that, apart from the areas of improvement that were tested in this research, the student seemed to also have a more positive stance concerning Written Expression, since he was more interested and involved in the process in school, he was more active during the lesson and was also more confident. Thus, a useful research could be on strengthening the motivation of students concerning Written Expression.

There is not only one method that meets the needs of all students. However, techniques that were used in this intervention and brought good results can be detected which, combined with other methods and techniques, could have great effects on developing a Written Expression teaching program. It is important to combine multiple strategies to aim at different areas and elements of a successful writing process. This requires the participation and modification of the role of educators in schools.

Moreover, the use of some means of procedural assistance, like outlined for the essays and the table of self-correction, had positive results on the intervention, as these techniques can help students understand the function and the way of executing Written Expression better. However, these strategies should be provided considering the principle of decreasing guidance, meaning that the independence of the student during the writing process should be promoted through time.

Educators should develop a variety of strategies and methods that they apply with creativity and flexibility in their effort on dealing with the writing difficulties of their students. These should include the teaching of cognitive strategies for every part of the writing process. At the same time, they should promote the development of metacognitive and self-regulation abilities, so as to promote the students' independent function, which helps the wider use of strategies and improves their performance in writing.

Finally, since the acquisition of writing demands an invigoration on the students' interest and sense of success, an effective approach needs the formation of a suitable educational environment in the school classroom in a way that it enables the practice of the students' right to learn to express themselves and communicate through Written Expression.

## **8. Conclusions**

In general, Early Academic Attainments are fundamental for every person's cognitive development [24] [25]. Though, emphasis is given to Written Expression, in most cases of their lives, some forms of writing abilities are required, and something is even more important for a student. This means that students that lack on this area usually have a disadvantage over their peers. Moreover, student's failure has an immediate effect on teacher's sense of self-efficacy [26]. A successful handling of Written Expression is crucial for a smoother academic course and, in a way, their social integration. Despite the limitations and the still unexamined areas of this research, the methods presented could be used as part of an intervention program, or even by educators in schools as a guideline in helping to improve their students' writing abilities. Although many new textbooks are used nowadays in schools emphasizing on teaching Written Expression, a successful teaching process needs more than just replacing school textbooks. Thus, there should be more researches on the methods and the levels that the educators can meet these new requirements for teaching, so that the teaching

of Written Expression stops being a “chore” for the students and starts becoming more effective.

Finally, the benefit of a successful intervention, especially when integrated in the school curriculum, can be great. The educator will acquire experience, patience, persistence and knowledge on how to support a student with learning difficulties. On the other hand, the greater benefit will be for the students, who will see themselves evolving, will experience success and thus will have more self-confidence [27]. By realizing that they can evolve and withstand any academic demands and expectations, they will be able to see Written Expression, not as a stressful process that they have to experience, but as an adventure and an experience that will offer knowledge and the ability to communicate with the world around them.

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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