
USE OF AFS SYSTEM BY STUDENTS IN MAJOR “SPECIAL EDUCATION” IN THEIR ONGOING AND PRE-GRADUATION PRACTICAL TRAINING

Zlatina K. SharkovaPaisii Hilendarski University of Plovdiv, Bulgaria, Faculty of Education zlaty.sh@gmail.com

Abstract: The article discusses diagnostic and corrective procedures of the AFS system for work with children with dyslexia, dysgraphia and dyscalculia. Its creative use by students from the major Special Education in their ongoing and pre-graduation practical training.

Keywords: AFS system, dyslexia, dysgraphia, dyscalculia, students in major Special Education.

1. INTRODUCTION

The forms of practical training, such as ongoing teaching practice and the pre-graduation teaching practice, at specialized schools and centers, are extremely important for the full-time students in the 4th year of the Bachelor program Special Education. During these practical forms of training, the trainee-teachers are placed in a real working environment and implement in practice the knowledge and skills, which they obtain in the mandatory and elective disciplines of their education. In a practical training journal each trainee-teacher describes the activities in the following main fields:

- Time schedule for the main activities during the practical training;
- Protocols from the attendance of the lessons taught by tutor-teacher (resource teacher, speech therapist);
- Plans for the lessons taught by the trainee-teachers;
- Evidence materials.

The levels of the theoretical and practical preparation of the trainee-teachers largely determine the success rate of their participation in the practical training in the 4th year of their program. This is also the time when their motivation and aptitude to pursue a career in the same field are formed, as well as their desire to continue their academic training in a Master's program. In view of the integration of the Bulgarian higher education to the structures and fields of education approved by the European Union, it would be reasonable the mandatory and the elective academic disciplines to include topics introducing the students to the successful global methods and procedures, aimed at children with special educational needs within the inclusive education.

The aim of this article is to share experience in the training of full-time students in the 4th year of the Bachelor's program Special Education, in the elective courses for the 7th semester.

Stages of practical-methodological preparation:

First stage: Introduction of the trainee-teachers to the basics of AFS system for work with people with dyslexia, dysgraphia and dyscalculia.

Second stage: Planning and creating didactic materials by the trainee-teachers, according to the basic fields of the AFS systems, for the needs of the practical forms of training – ongoing and pre-graduation practice.

Third stage: Approbation of the ongoing and pre-graduation practical training of the AFS system. Use of the specially made didactic means and materials. Generating good teaching practices.

2. Introducing the trainee-teachers to the AFS system

The students are introduced to the AFS system in the 7th semester, under the form of elective course.

2.1. Terminology

The common strategic framework for European cooperation in education and training defines three broad, international categories, based on the reasons for failure at school:

First category “disabilities”: students, whose learning difficulties are due to organic reasons.

Second category “difficulties”: students with emotional and behavioral difficulties or specific learning difficulties, in which the educational needs are caused by problems in the interaction between the pupil or the student and the environment.

Third category “disadvantaged”: students needing additional educational resources to compensate problems associated with their socioeconomic, cultural and/ or linguistic background.

Generally speaking, students diagnosed as dyslexics and dyscalculic fall in the second category. According to the International Classification of Diseases (ICD-10), section F-81 defines specific developmental disorders of scholastic skills, as follows, from F-81.0 to F81.3: Specific reading disorder; Specific spelling disorder; Specific disorder of arithmetical skills; Mixed disorder of scholastic skills. DSM-IV defines the term disorders of scholastic skills, including reading disorder, mathematics disorder, disorder of written expression. Category 315.9 includes

nonspecific disorders. It refers to learning disorders determined by intellectual deficit, sensory, neurological or somatic disorders, which are among the excluding factors in the specific reading disorders.

Currently the diagnostics, as well as the corrective work in the population of children and students with specific learning disorders in the general kindergartens and schools, is done by the teachers (general, resource, assistant-teachers), the parents, speech therapists, psychologists, physicians. These specific disorders include dyslexia and dyscalculia. “It is not obligatory the dyslexia to determine the bases of the specific learning disorders, although in many cases it is so. More and more often, dyslexia is differentiated as independent syndrome, including also writing disorders (dysgraphia). The dyslexic syndrome is a combination of multiple symptoms affecting the abilities to learn, read, write, space-time orientation, which separately cannot define the problem. The appearance of one of the symptoms causes the appearance of another, which together determine the dyslexic syndrome” (V. Matanova, 2001). Dyscalculia is defined as difficulty to work with numbers and figures, quantitative notions and basic arithmetic operations. The reasons for this are still largely unknown. It is believed, however, that the reasons are similar to those observed in dyslexia. The diagnosis of dyslexia and dyscalculia requires specific diagnostic actions. In the general and the specialized kindergartens and schools, it is completely possible to work successfully for efficient training and progress in the concerned category of children and students. The first signs of difficulties in learning basic academic knowledge and skills are usually observed by the end of the kindergarten training and the beginning of first grade. Therefore this period is appropriate for diagnostic activities aiming to discover dyslexia and dyscalculia in children aged 7 – 8 years. The diagnostic testing and evaluation are complex and continuous processes. The cases of dyslexia and dyscalculia usually involve disorders, which cannot be studied simultaneously and their evaluation is based on their manifestation over a period of time. Thus the diagnostics requires behavioral method of study. The constant observation and monitoring of the studied children/ students is practically very difficult, even impossible in most of the cases. This necessitates the idea for development of alternative methods of diagnostics, in which the tests are performed under conditions close to the natural learning environment. Since the main diagnostic and corrective activity in the kindergarten and the general school is done by the teachers, the assistant-teachers and the resource teachers, they must be able to use effective methods and approaches for diagnostics and treatment. For diagnostic needs may be used diagnostic tests: [1], [2].

The available diagnostic tests are standardized for the Bulgarian conditions, and are based on the AFS system. To this end, the teachers and the trainee-teachers in the general and specialized kindergartens and schools, can use the good European practices for work with children/ students diagnosed as dyslexics and/ or dyscalculics.

2.2. Essence of the AFS system

The AFS system, developed by Astrid Kopp-Duller and associates, and successfully used in Germany and Austria, can also be implemented in Bulgaria. The mastering and the implementation of its basic principles, even in the absence of specialized teaching skills, would improve the work with dyslexic and dyscalculic children. An individual development program must be designed and followed for each student diagnosed with dyslexia and dyscalculia. This program must follow certain basic principles. A key factor for the successful education is increasing the acuteness of the senses, which are necessary for writing, reading and calculating during the training process. In this context, there must be a preliminary differentiation of specific senses, which will be used during the special training. There are three main areas of the functions, which must be distinguished: Optical differentiation – perception, identification, distinction; Optical memory – memorizing during perception with the optical analyzer; Optical seriality – perception and memorizing of optical series; Auditory differentiation – perception, identification, distinction; Auditory memory – memorizing during perception with the auditory analyzer; Auditory seriality – perception and memorizing of acoustic series; Spatial orientation – spatial and temporal perceptions; Own body orientation – perception of the body position in space.

The collective of Astrid Duller and associates has developed and tested in the practice for teaching dyslexic and discalculic students, a series of trainings – AFS system. For the teaching needs in Bulgaria can be used trainings, directed at:

A (Aufmerksamkeit) Attention: *Development of attention qualities.* The different degree of attention in children with dyslexia/ dyscalculia, results in their failure to demonstrate what is expected of them in the mastering of the symbols and the operations with them. The making of errors is due to the fact that the thinking and acting, as processes, do not happen simultaneously. This results in the so-called *errors in perception*, obstructing the formation of linguistic and mathematical skills. The aim is to achieve synchronization between thinking and acting. To this end, different methods are used as trainings, targeting the fine motor skills and the eye-hand coordination.

F (Funktionen) Function: The functions, also called *sensory perceptions*, are specific for the children with dyslexia and dyscalculia. Usually, the very fast thinking process interferes with the correct reading, writing and calculating.

The affected children and students need more time to identify and learn the meaning of the symbols and the basic activities. It is important to know the functions of the different sensory perceptions, because the established dysfunction not always affects all perceptions simultaneously. The sensory perceptions include the visual perceptions, the auditory perceptions and the orientation in space.

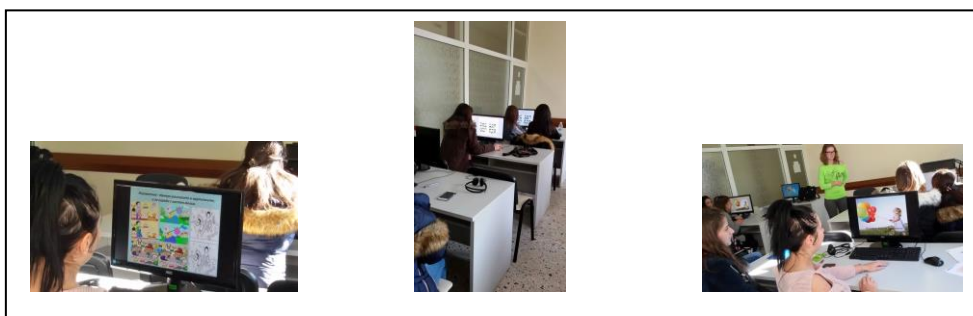
Subject of the trainings in this respect are: the optical differentiation – identifying the different numbers; optical memory – memorizing during perception with the optical analyzer; Optical seriality – perception and memorizing of series of symbols and signs; Auditory differentiation – distinction of similar sounding numbers and combinations of numbers; Auditory memory – memorizing of similar sounding numbers and combinations of numbers; Auditory seriality – identifying and memorizing sequences of symbols and numbers, according to the basic principle for sequence formation; Space orientation – identifying and learning the notions of numbers, space, quantity, multitude, measures. The trainings must not stimulate more than two of the impaired sensory perceptions, otherwise the trainees become overloaded and the training is inefficient.

S (Symptom). Symptom: The training on the symptoms aims to determine the *errors in perception* and to eliminate them. The children and students with dyslexia/ dyscalculia learn to read, write and calculate through a series of appropriate exercises. The important thing here is to maintain a consistency in increasing the attention and the sensory perceptions. The training process must include, if possible, the use of more than one sense for learning the basic academic skills. A good option is the use of 3D models of words, sentences, numbers, tasks. The trainings on symbols include also the different methods for acquiring reading technique, spelling and learning the basic arithmetic actions.

The specialized website administered and updated by the EÖDL experts [3], was also used for the training of the trainee-teachers.

2.3 Results achieved by the trainee-teachers

- The students from the major “Special Education” modules “Mental Retardation” and “Speech Therapy”, as trainee-teachers, were successfully introduced to the basics of the AFS system for work with people with dyslexia, dysgraphia and dyscalculia.
- They adequately planned their teaching activity, and created appropriate didactic materials in line with to the main fields of the AFS system, for the needs of the practical forms of training – ongoing and pre-graduation practice.
- The students generated good teaching practices, and implemented the AFS system in the practical forms of training.
- The training process of learning and using the AFS system was organized through delegating and implementing training tasks, which the students executed in the context of teamwork and changing roles. The generation and presentation of the developed didactic materials was done within the internet environment, using cloud technologies, individual and group electronic presentations.



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