

“UNDERSTAND AND TEACH”

HELPING STUDENTS WITH LEARNING DISABILITIES – DYSLIXYA

PROJECT NO 2016-1-BG01-KA202-023687

Intellectual output 2

National Desk Research Report

The main focus this research is to be find basic, universal and helpful information on dyslexia, on the entrepreneurial, innovative and contemporary of teacher training for dyslexia in the partners countries. Each project partner gathered resources and information that is specific to their national characteristics. All partners performed desk research for their own countries and searched for any former projects, guides or publications that fit the requirements of the research.

AUSTRIA:

DEFINITIONS:

In regard to what in Austria is usually called “Lese-Rechtschreibschwäche” (i.e. deficiencies in learning to read and write) – as a term “dyslexia” is more specific, denoting only acquired impairments – there is more than one definition in practical use currently. On the one hand you find the WHO ICD-10 version (Diagnosis Code F.81.0: Specific Reading Disorder):

- “A cognitive disorder characterized by an impaired ability to comprehend written and printed words or phrases ...”
- “A learning disorder ... an impairment in processing written words ...”
- “A learning disorder marked by impairment of the ability to recognize and comprehend written words.”
- “... deficiencies of comprehension or expression of written forms of language.”
- “Inability or difficulty reading, spelling or writing words despite the ability to see and recognize letters. (...)”
- “Reading disorder involving an inability to understand what is read,”

With its diverse subcategories which as an international standard are used by psychologists, psychiatrists etc. to diagnose what’s “wrong” with individual persons/children. Most often



this is happening on behalf of the parents respectively those adults in charge of the upbringing. It may provide some orientation for them, but has no practical consequences (anymore), neither in the administrative nor the educational sense. This is due to the fact that on the other hand within the last 10 to 20 years there has been a distinctive shift from classifications in (stricter) medical and psychological terms to “softer” or “broader” approaches to the complex phenomenon – a change in paradigm which is expressed in definitions like the one proposed by the ÖBL (“Österreichischer Bundesverband Legasthenie”), the biggest interest group for dyslexia in Austria. Here dyslexia is conceived as:

- “a manifestation of a heterogeneous variety of organic, cognitive and psycho-social impairments operating separately or in synergy.”

As a consequence of this definition, an unbundling of factors and extension of the validity of the category at the same time (for instance you do not have to show organic impairments to be “classified” as dyslexic), a considerably greater number of people/children – and not only the “clinical” ones – can be subsumed under the respective target group now; more people/children who suffer from more or less specific difficulties in learning to read and write than before can therefore count on support, at least theoretically. But unfortunately that is not the whole story. The “softening” of the defining boundaries (the new fluid demarcations) makes it also increasingly hard to denote the point from where dyslexia starts and professional help is really needed. In fact the recent trends to classify – adopted by the educational authorities – tend to mix it all up. Severe cases as well as such only slightly indicating evidence for dyslexia or even undecided yet deserve, again in principle, the same amount of attention and assistance. Intended to account for the personal needs and traits of individuals and designed to systematically implement diversity into the field – and to avoid any kind of stigmatization – the practical outcome of this “personalization” and “individualization” looks quite different: Instead of raising the chance to gain support the lack of diagnostic notification (to be more precise we have to say: the administrative “farewell” to approve those diagnoses) cut important services such as assistant teachers and other supporting personnel off; these are reserved to children/pupils with clearly defined physical and/or mental limitations only. Following from that and following the newly established principles and guidelines for the tasks and duties of teachers of all levels the biggest load of the responsibility to enhance pupils with reading and writing difficulties lies in their hands resp. “returns” to them. And in this a number of further problems can be found.

TEACHER KNOWLEDGE ABOUT DYSLEXIA, THE TEACHER’S ROLE & TEACHER EDUCATION

As the guidelines of the Ministry of Education and the decrees by the Educational Authorities of the nine federal counties (“Bundesländer”) – as the teachers of the primary and secondary level are administratively assigned to these county authorities there are not uniform but largely consistent regulations to be found – suggest as a last consequence it is up to the kindergarten- and especially to the school-educators to:

- (1) detect dyslexia and 3 dyslexia connected problems, to
- (2) individually screen specific needs and performances as well as to

(3) start off the appropriate means to initiate the essential learning processes.

As a survey based on 26 completed “qualitative” questionnaires – built-up by a block related to questions about their self-assurance in the field and by another one testing their actual knowledge about it – we conducted shows many teachers feel the pressure of these heightened challenges. Some are simply overwhelmed by them and their inability to live up to (all of) them. Some others – still wanting to help – remain in their routines, partly relying on “old” and outdated knowledge about dyslexia (amongst that: misnamings, misinterpretations of causes, counter-productive measures and so on).

And some of them – remarkably and by no means only those in service for many years – do not even know that the shift in paradigm depicted above has taken place. But nearly all of them address other aspects and priorities in their day-to-day work with children at school which prevent them to intervene properly: “There are simply a lot of other problems (...) and not enough time”, as one of the respondents noted in her comment to the pertaining question.

Another central reason for the modest contentment with their performance in dyslexic issues and for the somehow restricted confidence in their own competences in the treatment of dyslexic pupils – most of them see themselves in a sort of middle rank position (“fairly secure”) and characteristically those seeming to care and know more than others regard themselves as less prepared – is for sure the relatively poor equipping with tools and knowledge throughout their own education as teachers; even if they wanted to they simply did and do not get enough information as some of them explicitly mentioned. To be fair it must be stated that in the meantime a bunch of material is available. But though these state-of-the-art handbooks and instructions for basic practical strategies are intelligible and easily accessible they are somehow presented as mere advices. They are not systematically mediated and have to be purchased, rented or downloaded by self-initiative. And though the legal accountability of teachers mentioned above is regularly communicated to them by the authorities, it is not mandatory to study this information. Nor are the facts and skills ever evaluated. So you can sometimes view the paradoxical situation that the administrative expert staff sends harsh official notes to its employees to intensify their knowledge and capacities without providing further parameters and infrastructure – and without forcing them to do so.

Even if some restructuring is on the way currently – and a lot of emotional discussions about it are taking place – this is somehow paralleled by the formal ways to become a teacher. Whereas in past times special knowledge about special needs (amongst them: dyslexia knowledge) was largely restricted to the curricula of the so called “special educators” (“Sonderschullehrer”) – educated separately from the prospective “normal” teachers and teaching in separate schools (“Sonderschulen”) afterwards –, this segregation of educational routes has been suspended in 2015 (as well as the final closure of these special schools is soon to come). Since then everybody going to be a teacher has to go through at least some courses of special needs education. But on the one hand the level of the “old” special educators is hardly achieved that way – in relation to the former coverage of 180 ECTS the new modules

run up to only 60-80 ECTS depending on the academy you choose. On the other hand a good deal of it is optional, part of the individually choosable focuses (saying “Special” or “Inclusive Pedagogics”) where more than a handful of alternatives exist. And as a sample of the 2016/2017 courses in special education at the teacher training colleges in Styria (one of the nine counties of Austria) shows it is thirdly not well guaranteed that lectures specializing on dyslexia are even held. This year for instance there have been courses and seminars to “cerebral-visual perception disorders”, “epilepsy as a challenge”, diverse autism spectrum disorder issues, “left-handed children” and “arithmetical problems of children with non-german mother tongue”, but no explicitly “dyslexic” topics at all.

After all of that and even if it is too early to assess the effects of the modifications in teacher training – Bologna-inspired transformation of “Academies” into “Colleges” in 2007, separation into a bachelor and master program whilst extending the number of semesters (altogether it takes 4 instead of 3 years now to become a teacher of the compulsory levels; those teaching in high schools have to attend the university), administrative approximation to universities etc. – in a more objective way one cannot be surprised about the deficits in knowledge and practical usage of skills in dyslexia already stated. A significant gap between the hard facts and the officially expected competences (“Standard 5” for Styrian teachers: “she/he is substantially informed about all kinds of impairments in the field of reading, writing, calculating competences and knows how to professionally react on them”) is there.

This has also become apparent in the final segments of our survey where some direct skill questions were asked. All in all teachers do seem interested in dyslexia concerns, but are often only rudimentarily informed. At the same time and partly consistent to the findings presented by Washburn und Brinks-Cantrell (2011) about American teachers there is a slight tendency to overestimate the own knowledge; the trouble starts well beyond the counting of syllables and phonemes; “morphological awareness” was rightly addressed by only a minority of four respondents. Apart from that implicit skills prevail to explicit and practical to theoretical knowledge. Remembering the strong effect that well informed teachers have on the learning progress of dyslexic pupils (cf. Washburn/Brinks-Cantrell [2011]) a lot of enhancement is to be done.

First and foremost it seems a question of teaching the teachers and time-capacities in their daily work. The readiness and eagerness to learn are there.

BULGARIA:

For decades dyslexia has been defined in various ways. For example, in 1968, the World Federation of Neurologists defined dyslexia as a

- **“Disorder in children who, in the standard way in class, failed to attain reading and writing language skills commensurate with their intellectual abilities.”**

According to the National Institutes of Health of the United States, dyslexia is a cognitive impairment that prevents a person's ability to read and write, and sometimes to speak. It is

believed that dyslexia is caused by impairment of the brain's ability to "translate" sound or visual stimuli into understandable language for the individual. It is not the result of visual or hearing problems, and is not due to mental retardation. Dyslexia differs in severity and symptoms in the different affected children. It may not be noticed, especially in early school age. Children can be tense and worried about the difficulties they have in acquiring reading and writing skills, but they cannot define the cause of their condition. Some children have low self-esteem and symptoms of depression. Others may dominate behavioural problems, lack of motivation, or even dislike school.

Under the influence of the Russian 'defectological' school, in Bulgaria the terms 'dyslexia' and 'dysgraphia' have for a long time served to indicate difficulties in reading and writing, respectively. In the past decade, however, the term 'specific learning difficulties' has become more popular. There is still a debate between specialists whether the terms 'dyslexia' and 'specific learning disabilities' are completely equivalent. Nevertheless, the majority of professionals adopt the following definition:

“Dyslexia is a summative group of disabilities caused by disintegration of perceptual, cognitive and language abilities that influences the ways of input, elaboration and storage of linguistic type of information, which manifests itself by difficulties in acquiring the basic school skills - reading, writing and math. These disabilities are not related to mental retardation, sensory impairments, severe emotional disturbances or behavioural disorders, nor to social, or cultural factors.”

Other definitions that are often adopted in Bulgaria is the following:

- “Dyslexia is a general category of specific learning disorders, which refers to the ability in seven specific areas of functioning: impressive speech, expressive language, basic reading skills, comprehension of reading, basic writing skills, understanding of the writing, basic math skills, and mathematical thinking” (Matanova, 2001).

The process of identification of problems in acquiring basic school skills, i.e. reading, writing and math, usually takes place in second or third grade. Identification is based upon the teacher's perceptions of failures in following the school curriculum. Early predictors of dyslexia are looked for in relation to language deficits in pre-school years.

Various kinds of specialists are responsible for identification and assessment, including psychologists, speech therapists, child neurologists, child psychiatrists, etc. The speech therapists are those who deal with the intense assessment that involves determination of the development level of high cortex functions, as well as of reading and writing skills. The psychological assessment focuses on measuring the current intellectual functioning, specifics of the cognitive processes, self-esteem, self-image, etc. Unfortunately, those cases diagnosed as dyslexia are not a matter of team discussions thus the particular specialists diagnose and treat only their separate parts of this multifaceted phenomenon.

In Bulgaria, according to an epidemiological study conducted in Sofia (September, 2012, MEYS), about 18% of primary school children experience learning difficulties. Part of this population (about 7%) shows specific disorders or dyslexia. One of the serious problems here is that parents, teachers and personal doctors of these children are often unaware of the dyslexic symptoms, they do not know whom to ask for, and who specialists provide adequate diagnosis and appropriate follow-up intervention.

The National Legislation:

In Bulgaria the basic normative document, which deals with dyslexia, is Ordinance No. 1 on the “Education of children and pupils with special educational needs”

Art. 3. (1) Children and pupils with special educational needs shall be trained and educated integrally in the kindergartens under Art. 18 of the Law on Public Education (PDO) and in the schools under Art. 26, para. 1. 1-10 or 12 of the PDO

(2) Children and pupils with special educational needs may be educated and educated in the special kindergartens and schools after exhausting all the opportunities for integrated education and training in the kindergartens under Art. 18 of the PDO and in the schools under Art. 26, para. 1, item 1-10 or item 12 of the PDO.

(3) Children and pupils with specific learning difficulties are trained to integrate in kindergartens and schools in the public education system by receiving psychological and pedagogical assistance from a psychologist and speech therapist.

The problems in Bulgaria:

In practice, there are no legal provisions concerning the support of learners with specific learning needs at upper levels of education, as well as for older learners in various forms of post-secondary education and training. However, the word “dyslexia” itself cannot be found in any Bulgarian legislative document. Since there is no official document that sets out the rights of dyslexic people in Bulgaria, students with dyslexia cannot benefit from any specific compensatory or dispensatory measures.

In the last years a State Logopedic Center at the Ministry of Education was established. The speech therapists who work there are dealing with the problem of Dyslexia along with other learning disabilities. On school level predominantly the speech therapists are working with dyslectic children and parents can turn to them. When dyslexia is discovered the intervention is provided primarily by speech therapists in mainstream schools. The children receive additional extracurricular support. The duration of a session at the speech therapist's centre is about 45 minutes and takes place two to three times a week. The therapeutic support concerns also writing disturbances.

The problem comes from the fact that the offices of these speech therapists are positioned in metropolitan schools in the big cities. 80 % of them are in the capital - Sofia. If the child is living in a small town or village there is nowhere to turn to for assistance.

Apart from the speech therapists and the resource teachers and in schools the support for children, young people and adults with dyslexia in Bulgaria as well as for teachers and trainers working with students with dyslexia is currently limited to non-governmental organizations, private specialists and academic groups in some universities. There are several attempts to regulate this support (such as private services for children with dyslexia), but overall the situation can be defined as vague and chaotic.

THE DIAGNOSIS OF DYSLEXIA:

As far as diagnosis is concerned, there is no standardized dyslexia test. As well as differentiation between tests for people of different ages. In theory a general screening of all children is made by a speech therapist at the beginning of the school year in primary education courses. Within this process, the assessing therapist also collects data of reading/writing/maths related problems from class teachers. Testing may be done in specialized medical institutions by psychiatrists, psychologists, in collaboration with speech therapists and neurologists when necessary. Testing can be initiated by parents or learners themselves (when it comes to adults) at their discretion in state logopedic centres. The test includes neuro-psychological and cognitive assessment of writing and oral expression skills. Standardized diagnostic procedures and questionnaires for coordination assessment, short-term and working memory, level of text comprehension, etc. are used.

Assessments can be made in specialised medical centres by children's psychiatrists or clinical psychologists, in collaboration with speech therapists and neurologists when necessary.

Assessments can also be initiated by parents as a result of the screening or individually in a state speech therapists' centre, where children are assessed by speech therapists, psychologists and neurologists. The assessment consists of a neuro-psychological and cognitive appraisal of written and speech presentation. Standardised diagnostic procedures and questionnaires are used to evaluate coordination, short term and working memory, text understanding, etc.

In more than 70 % the initiators of the testing are the parents not the teachers. Furthermore often children with dyslexia are misdiagnosed with psychological abnormalities or development delays, which place them in the disabled category of people with disabilities. Many of them drop out of school or are switched to a specialized private programme, because the content is not being delivered correctly.

Finally, there is no differentiation in diagnosis for different groups of people, nor are there any specialised centres for diagnosis of dyslexia in immigrants or bilingual/multilingual individuals.

There are a very small number of immigrants in Bulgaria, and although bilingual individuals in the country number over 15% of the population they have never been considered as a separate group when it comes to assessing their specific learning difficulties/needs. In general, the education system in Bulgaria tends to be inclusive. All children attend mainstream school, so dyslexic students (diagnosed or not) are included in mainstream

classes. There are very few “special” schools left in the country and those are for children with severe intellectual disability or visual and/or hearing impairments.

TEACHERS’ TRAINING:

The discipline of Psychology (as a Bachelor’s Degree) is taught at five Bulgarian universities (three state and two private), while the discipline of Special Education (which currently covers Speech and Language Pathology and Therapy) is established in eight universities. These two disciplines deal with the issues of dyslexia. The students become familiar with the basic characteristics, diagnostic criteria, and therapeutic approaches to dyslexia in the frame of the module 'Abnormal Psychology', which constitutes a part of the curriculum in Psychology.

The specialty of Speech and Language Pathology and Therapy provides considerably wider and more thorough knowledge of the field of dyslexia. The discipline to cover all these issues is usually formulated as 'Writing Disorders in Specific Learning Disabilities'.

Unfortunately, students in the specialties of “Primary and Pre-school Education” are not provided with any kind of knowledge related to dyslexia. This ultimately explains one of the reasons why dyslexia is sometimes identified so late.

There is a Master Degree Program in Special Education in Sofia University which is meant for individuals holding a bachelor’s degree in pedagogical subjects and bachelor’s degree in other subjects and have gained the ability of legally teaching certain school subject.

The goal of the programme is to train the experts of mainstream schools (pre-school, primary and middle school age) and other institutions which work with children with SEN under the conditions of integrated education consistent with age, type and degree of the special needs of the children.

The present master’s degree programme will form competence which answer the needs of society and the requirements toward the contemporary teacher. The subjects, which are included in the programme, emphasize the psychology-pedagogical characteristics of children with SEN, the necessity of inclusion not only in the mainstream class, but also in society as a whole.

The master’s degree programme gives the pedagogy subjects graduates the chance to acquire the following qualifications:

- Special educator in pre-school degree for work with children with special educational needs;

- Special educator in junior high school degree for work with children with special educational needs;
- Special educator in primary school degree for work with children with special educational needs;
- Special educator in high school degree for work with children with special educational needs;
- Special educator for work with children in a day care centre;
- Special educator for work with children with considerable learning challenges in social institutions;
- Special educator for work with children with Autism Spectrum Disorder;
- Special educator for work with children with mild special needs;

Until now, there have been two PhD theses and two monographs on the issues of dyslexia in Bulgaria. These are 'Disturbances in Reading and Writing' by Ivan Kerekovski and 'Dyslexia' by Yanya Matanova.

Many Bulgarian and foreign articles concerning the issues of dyslexia have been published in the specialized periodicals in medicine, psychology and education. In the past few years, seminars on dyslexia for mainstream teachers have been implemented.

NPOs and individuals working with dyslexia:

Association "Dyslexia – Bulgaria" was established in Rousse, in 2005, as a non - profit association in public benefit. The main activity is focused on people of different ages with dyslexia and problems Related to training, to families, teachers and teachers and the professionals who work with them daily. The association works with children, adolescents and adolescents, adults who have problems with reading, writing or calculus, coordination or concentration. Meetings and trainings are held with teachers, schools, psychologists, speech therapists, resource teachers, employers who work directly with people with specific educational needs and parents.

The Centre for Inclusive Education (CIE) is a Bulgarian non-governmental organisation, which main aim is to promote inclusive education and make it happen for every child. Many of its projects and programs are aimed at children with specific disorders of the ability to learn (the Bulgarian term for dyslexia, dyspraxia, hyperactivity with attention deficits, autism, etc.). They are working for social inclusion and quality education for all children and to protect those in need.

GENERAL TEACHER'S PERCEPTION OF DYSLLEXIA IN BULGARIA – PROBLEMS AND CONCLUSIONS:

Professionals who lack an understanding of dyslexia tend to associate dyslexia with genetic, neurological and dietary issues in ways that meant they viewed dyslexia as being in the domain of health professionals or resource/support specialists who would 'correct' the child's deficits.

They assume that children required medical and/or specialist intervention rather than educational support. It is not surprising that professionals had these assumptions when the research on the medical causes of dyslexia is so unclear.

In Bulgaria there are different organizations and institutions trying to take measures and adopt programs helping people with dyslexia – however many approaches to dyslexia are at risk of being reactive in nature. It was recommended that professionals develop proactive approaches to the identification of dyslexia. There is great potential to move to a position where we balance ideas of inclusion with specific approaches to dyslexia. We concluded that identification of specific solutions to dyslexia involved trial and error and that class teachers and early years practitioners were best placed to collaboratively identify such solutions with parents and children. Specific approaches to dyslexia on their own cannot enable inclusive practice, that policies in themselves will not bring about more inclusive educational contexts, and that national and regional authorities need to do more to reduce the types of professional confusion that prevent a shift to more inclusive mainstream practice in Bulgaria.

The approaches to dyslexia would only be successful if they:

- were built on home/school/early years setting cooperation, collaboration and in-depth discussions between professionals, parents/carers and children.
- clearly identified the roles of staff in relation to different levels of intervention, focus support on the mainstream setting and enable mainstream professionals to become more proactive
- fostered peer group understanding of dyslexia, placed children at the centre of decision-making and recognised the strengths/abilities of younger children
- enabled a balance of generic and specific support, avoided labelling children to early and utilised creative/holistic pre-literacy approaches in early years setting.

GREECE:

1.1 Organization of the pre-service and in-service training.

A.) Pre-service education programmes and curricula characteristics of the primary school teachers, psychiatrists and psychologists.

● Primary school teachers graduate studies:

Teachers enter their university education after succeeding in the after-high school national examinations. Attendance in all public Greek universities is tuition free and all departments follow the Bologna principles. The length of studies is four academic years (each year is comprised by two semesters and students have to take a written or oral examination for the courses they have attended, at the end of every semester or in September). Depending on each university, the number of courses a student has to take in order to complete his/her studies varies (usually about fifty-two courses). Students have to attend a given number of obligatory courses, there are also some choices for non-obligatory subjects, labs, a bachelor's dissertation and a one or two-semester placement in primary schools or in special education primary schools. On average, the courses on dyslexia and literacy problems students attend are two to three. If a student wishes to further pursue this academic area, he/she can take additional courses, labs or can specialize through a bachelor's dissertation on those subjects. Furthermore, there are two university departments focusing on special education. However, the number of courses offered on the specific subjects is not as high as expected, but almost the same as in the other departments. The curriculum places emphasis on the areas below: pedagogics and science, educational programs and teaching methodology, humanities-linguistics and social studies, psychology-special education and survey methodology, foreign languages. (www.primedu.uoc.gr, www.eled.auth.gr, ptpe.edc.uoc.gr, www.elemedu.upatras.gr, www.sed.uth.gr, www.uocm.gr)

● Psychology graduate studies:

Admission, system of course attendance and length of studies is the same as above. A psychology student has to attend obligatory child psychology courses but can also focus on this area by choice. The curriculum places emphasis on the areas below: fundamental principles of psychology, survey methodology and statistics, developmental-educational psychology, clinical psychology, biopsychology-neuroscience, social-criminal psychology, work ethics. On average, the number of courses on dyslexia and literacy problems is two to six (compulsory or non-compulsory). (www.psy.auth.gr, www.ppp.uoa.gr, psy.panteion.gr, www.psychology.uoc.gr)

● Child-psychiatrists' graduate studies and medical internship:

Admission to medical school is achieved through the national after-high school examinations. The length of studies is six years. The curriculum places emphasis on the

following areas: clinical-laboratorial section, pathology, surgical section, obstetrics-pediatrics, social medicine (including psychiatry-neurology and leading to child-psychiatry) (www.pyr.gr/sxoles/iatrikis.htm). After their six-year studies in medical school, doctors have to work in a regional medical centre for a year. Doctors who wish to specialize in child-psychiatry attend a four and a half year internship in a hospital. The internship includes six months of clinical neurology, eighteen months of adult clinical psychiatry, two and a half years of child psychiatry (one year in a child psychiatry hospital section or a children's hospital and one and a half years in medical-pedagogical centres, where children with learning difficulties or disorders are examined and officially diagnosed). Interns accumulate their working experience in special schools, day-care centres for children with special needs, juvenile delinquency courthouses and organizations for the protection of the under-aged. Their internship is supervised by the director of the child-psychiatry department or the medical-pedagogical centre. (Presidential Decree no379/1995, <https://nomoi/info/ΦΔΚ-A-214-1995-ζε1-1.html>.)

- **Private colleges:**

Admission to these private institutions does not require any kind of examination. The student is obliged to meet the financial requirements of the institution. In some institutions, which are partnered with universities abroad, the only requirement is a certification of the respective foreign language knowledge. Private colleges in Greece do not offer a primary school teacher bachelor's degree (however, there is a pre-school teachers' programme, offering the choice of special education training) or a doctor's degree, but they offer a special education bachelor's degree and a psychology degree. Both are three-years long. Special education students attend a course on literacy problems. Psychology students attend a course on educational psychology. Students end their special education programme with a work placement. (www.mitropolitiko.edu.gr, www.medcollege.edu.gr)

- **Post-graduate studies:**

Due to the increase on the special education job opportunities, there is also a tremendous increase on the special education post-graduate degrees offered. Perspective students can choose from primary school education, special education and psychology university departments or from private colleges and e-learning master's programmes. Some universities require that the students take an examination in order to be accepted or declined but are tuition-fee free. The majority, however, have a no exams policy but require tuition fees. Their programmes are comprised of research methodology courses, dyslexia and learning difficulties courses, research and in somecases a placement. There is an indicative list of dyslexia and literacy problems master's degrees below:

- **University Bachelors Degrees**

University of Patras (www.elemedu.upatras.gr)



- ✓ Μεταπτυχιακό Πξόγξακκα Διδίθεπζεο ζηηο Δπεζηήθεο ηεο Αγογήο, Καηεύπλζε: Learning Difficulties-Dyslexia (Μαζεζηαθέο Γπεθνίεο-Γπεμεία) University of Thessaly (www.sed.uth.gr)
- ✓ Επιστήμες της Αγωγής: Ειδική Αγωγή, Κατεφθυνη: Learning Difficulties (Μαζεζηαθέο Γπεθνίεο), University of Crete (eidikiagogi.edc.uoc.gr)
- ✓ Γηαηεκαηηθέο Πξόγξακκα Μεηαπεηηηαθέο Σπεπδώλ κε ηίηην: Δηδηθή Αγογή, Δμεδίθεπε ζε Μαζεζηαθέο Γπεθνίεο

● **e-learning**

University of Athens (<https://elearn.elke.uoa.gr>)

- ✓ Learning Difficulties-Dyslexia (Μαζεζηαθέο Γπεθνίεο-Γπεμεία)
- ✓ Teaching Foreign Languages to Students with Dyslexia (Ζ Γηδαζηαία Ξέσλ Γησζώλ ζε Μαζεηέο κε Γπεμεία)
- ✓ Learning Difficulties: (Μαζεζηαθέο Γπεκνίεο: Αμηνίγεζε θαη Σηξαηεγηθέο Παξέκβαζεο)

● **College`s**

Mediterranean College (www.medcollege.edu.gr)

- ✓ Advanced Professional Diploma Σύγρηνλο Δθαξκνέο ηεο Δηδηθήο Αγογήο

Metropolitan College (www.mitropolitiko.edu.gr)

- ✓ MA Special Educational Needs (Μεηαπεηηηαθέο ζηελ Δηδηθή Αγογή)

B.) In-service education programmes and curricula characteristics of the primary school teachers, psychiatrists and psychologists.

The majority of schools in Greece are public, without tuition fees and attendance up to junior high school is compulsory. There are also some private schools which follow the national legislation and curriculum. Before the financial crisis of 2007, primary school teachers and psychologists were hired through an independent national examinations system called ASEP. By succeeding in the exams they acquired tenure. According to the current laws, teachers with such a position are not obliged to undergo any kind of assessment until the end of their service years. The past few years, however, there have been efforts to introduce some kind of assessment to the educational system but these efforts still remain fruitless. During the years of the financial crisis no tenured staff has been hired, but only contractual staff. The latter are hired at the beginning of the school year and fired at the end of it. The requirements or qualifications for the contractual staff to be hired in schools are: date of bachelor degree



acquisition, Master's degree, Phd, disability percentage, relevant working experience etc. Both tenured and contractual teachers attend a compulsory series of teaching training seminars at the beginning of their careers. During their service years, teachers can attend various teaching seminars or labs organized by education advisors, for free. Education advisors are appointed by the Ministry of Education in order to provide scientific and educational aid and guidance to the educators on each teaching subject and each geographical prefecture respectively. Although teachers are provided with the above helpful teaching aids, in many cases their development is a personal choice and depends on their inner motives and aspirations for any development. This means that they often turn to private institutes or teachers' unions or teacher-parents associations for seminars and further education.

Contractual teachers who wish to be hired in special education schools need to have a Bachelor's degree on special education or a Master's degree on special education or a Phd on special education or a Master's degree or Phd on educational psychology. Psychologists need to have a Master's degree or Phd on educational psychology. (<https://edu.klimaka.gr/ekpaideytikoi/anaplirotes-orumisthioi/233-egkyklios-proslhpshs-anaplhrtws-wromisthioi-eidikis-agwghs.html>)

Child psychiatrist are assessed by a board selecting medical professionals based on their relevant working experience, scientific research and publications, teaching experience and an assessment by a hospital committee.

C.) Pre-service education programmes and curricula at the university, college, school district, state education department or for-profit organization, assessed or credited by any type of external agency.

In Greece there is no type of external agency assessing the pre-service programmes and curricula at the university, college, school district, state education department or for-profit organization.

1.2 Address of issues related to literacy problems and dyslexia in pre service training

A.) Pre-service education programmes for primary school teachers, psychologists, psychiatrists.

Teachers, psychologists and psychiatrists learn to understand and teach students with dyslexia and literacy problems by studying during the attendance of relevant subjects, by attending relevant labs, seminars and university conferences or by carrying out surveys on these areas. Furthermore, students of the department of pedagogics have to compose lesson plans, audit in several classrooms and finally teach a small series of lesson plans during their placement. Psychologists and psychiatrists can complete their placement in medical-pedagogical centers or centers for the diagnosis of disorders and literacy problems.

B.) National legislation that provides guidelines to the organization of the curricula of the in-service training for primary school teachers, psychologists, psychiatrists.



The Presidential Decree no301/1996 includes a curriculum for special education, giving some general guidelines for the special education programmes (Πξνεδξηθό Γήάηαγκα 301/1996, Α.Φ. 208. Αλαπηηηθό Πξόγξακκα Δηδηθήο Αγογήο, <http://www.seepeaa.gr/displayITM1.asp?ITMID=139>).

The Ministry of Education has issued a specific curriculum on literacy problems and has adjusted the educational curricula to meet the needs of students with literacy problems, following the guidelines of the Presidential Decree. The aforementioned curriculum provides a theoretical context, an adjustment of the general curriculum on the subjects of Language, Maths and Science. It also offers lesson plans and extra educational material for students (Τδνπξήάδνπ Μ. (2008), Αλαπηηηηθά Πξνγξακκαηα Μαζεηηηθώλ Γπζθνληώλ, Διεθέξζε-Δπαηδεηηηθή. Πξνζαλαγέο Αλαπηηηηθώλ Πξνγξακκάησλ γηα Μαζεηέο κε Μαζεηηηθήο Γπζθονία, Παηδαγσγηθό Ηιηηηηηθή, users.sch.gr/christinakis/superedu/2015/09/06/prosarmoges_aps/).

1.3. Address of issues related to literacy problems and dyslexia in specialized training.

A) In-service education programmes for primary school teachers, psychologists, psychiatrists, issues related to understand and teach students with literacy problems/ dyslexia

In-service teachers are further trained in order to understand and teach pupils with dyslexia and learning difficulties through theoretical seminars or labs organized by the Special Education advisors or the Ministry of Education. Moreover, as already mentioned in 1.1b, many a times teacher development and in-depth knowledge of such areas is a personal choice.

B) Specialized training in Dyslexia/ specific learning disabilities/ literacy problems

At a graduate level there are no university schools specializing in dyslexia and literacy problems. As mentioned in 1.1a, students can attend certain courses and labs on these subjects or can write a dissertation focused on these areas. There are several

choices on a post-graduate level on these specific areas of expertise (Master's degree or Phd), however, which were also mentioned in 1.1a.

C) National legislation that provide guidelines to the organization of specialized training for professions who to support students with dyslexia

While surveying for and writing this report, no relevant national legislation could be found.

2. Former projects, guides or publications that fit the requirements of the research

2.1. Projects and publications

A) National research projects related to dyslexia

There was no information found on a national survey on dyslexia. Several surveys are carried out, mostly for graduate, master's or Phd dissertations. These dissertations, however, are based on a small and limited scale sample. Here are some examples, only published in national language:

- ✓ Δζληθό θαη Καπνδηζηηαθό Παλεπηζηήκην Αδελώλ. Γηδαθηηθή Γηαηηθή, Παγγείαο Φαηδεκηαή (2010). Αλαγλσζηηθέο Γπζννίεο ηε δπζηεμία, θαηαζθεπή ζπνκεηηθνύ εμαίεηπ αλίεπηεο δπζηεμηώλ ραηαηεξηζηηώλ ζε καηεθέο δεκηηθνύ. (www.didaktorika.gr/eadd/handle/10442/24250).
- ✓ -Παλεπηζηήκην Γπνηθήο Μαηεδνλίαο, Παηδαγνγηθή Σπννή, Τκήκα Νεηαγνγώλ. Π.Μ.Σ. : Δπζηηθήο ηεο Αγνγήο, Καηεύεπηε: Γίγισζε Δηδηθή Αγνγή θαη Δθαίεπηε. Γηπισκαηηθή Δμαηία: Οη αηηηήεηεο ηεο εθαηεπηηθήο γειηθήο θαη εηδηθήο αγνγήο γηα ηε θοινηγηθή ειεκεηώηεηε ηεο καηεμήο δπζηεμίαο θαη ηεο ηξόπηεο δηαηεξηθήο ηεο. Φεζεθελίδνπ Αηθαηεξίε (Ηνύιην 2016). (<https://dspace.uowm.gr/xmlui/handle/123456789/376>)

A study about "...the beliefs of general and special educators who teach in elementary schools in dyslexia issues". According to the results of the study, "...the general education teachers, as opposed to specific, have limited knowledge and misconceptions of dyslexia related issues" (p.9)

- ✓ -Παλεπηζηηεκηηκή ζεζαίαο, Βεηήζεηε ηεο νξνηγθαηηθήο επίδνζεο καηεμήο δπζηεμίαο ηεο ηεο εηδηθήο νξνηγθαηηθήο κέηεο. Γηαλπνύηε Μαηία (Βνίνο 2011) (ir.lib.uth.gr/handle/11615/41249)

Intervention in six students according to the illustrative method. Result: it highly contributed to the learning of difficult words and the diminution of etymological mistakes.

B.) Ten national publications related to understand and teach students with dyslexia

- ✓ -Τδνπεηηθήο Μ. & Μπάεκηαο Γ. (2003). Γπζηεμία: Δπζηηεκηηθήο αηηηήεηεο θαη παηδαγνγηθήο αηηηήεηεο, ηεο επζηηεκηηθήο επεξεξίδαο ηεο Χπννηγκηθήο Δηδηθήο Βνξείηεο Δηδηθήο, (Δπηκ. Α. Δπηηήε, Μ. Τδνπεηηθήο, Α. Λεηηαξή), ηόκνο 1, ζε. 11-33, Δηεηηθή Γάεκηα.
- ✓ -Βάεπηηαο Μ. & Σπαηηηθήο, Η. & Μνπδάηε, Α. (2007). Γλσζηηθήο θαη εθαηεπηηθήο δεκηήεηεο παηηθήο δπζηεμίαο δπζηεμηήο καηεμήο δπζηεμίαο ηεο ηξόπηεο δηαηεξηθήο ηεο. Παηηηθήο ηεο Παλεπηζηηθήο Σπλεδξίηεο Δηδηθήο Αγνγήο: «Δηδηθή Αγνγή ηεο Κνηολίαο ηεο Γλώζεο» Αηήλα: Δθδότηεο Γεγώεο.

a special education teacher and take place in parallel to the pupil's school timetable. The integration class teacher can teach up to four students in a class. Special needs students (autism, down syndrome, kinetic disabilities) are provided with a special needs educator, who is appointed on one child exclusively and follows the child's timetable in his/her classroom.

Since 2014 there are also certain teams comprised by a psychologist, a social worker and each school's special needs teacher and headmaster, which help in the formation, observation and completion of each special needs or integration class student's schedule, based on their specific educational needs. They can consult parents to address relevant public services as well. Children with special needs, unable to attend typical primary schools, can attend special education schools or can be educated by a public school teacher at home.

Special needs schools offer their students physical therapy, occupational therapy, speech therapy, sessions with a psychologist or a social worker. Staff is also comprised by a school nurse and special assistants. (www.pi-schools.gr/special_education_new/index_gr.htm), (law 2817/2000: 6dim-edess.pel.sch.gr>N.2817.00.doc)

B.) Are there national education/school legislations that provide guidelines to the organization of support to students with dyslexia? If yes, how is the educational support provided to students with dyslexia organized?

The only relevant legislation found, concerns junior and senior high school students with dyslexia and literacy problems, who have the right to take oral examinations instead of their annual end of the school year written examinations. The students have to appear in front of a special examinations committee appointed by the Ministry of Education. The same law is applied on the national university entrance examinations. (Πανεδηθό Γνάηαγκα 60/2006, Άξξξν 27, <http://athena.net.gr/files/nomothesia>).

C.) Definition of Dyslexia

According to „Special Learning Difficulties: Management and Manners of Intervention“, a guide approved by the Ministry of Education, Dyslexia is considered to be a sub-category of learning difficulties. In many cases it is used as a synonym for the term „special learning difficulties“, including dyscalculia and graphic dyslogia. Graphic dyslogia is often mentioned as a sub-category of Dyslexia, leaving dyscalculia out as a separate category. Dyslexia is divided into the optical and acoustic type. The first type has been observed to confuse letters with optical resemblance, to have difficulty in recognizing words as a whole and a weakness in retaining the optical image of the word in his/her memory. The second type has a difficulty in distinguishing the syllables or the phonemes of words and to recognize non-words or low-pitch words. (www.greek-language.gr/amea_content)

D.) Associations related to Dyslexia

There are several Professional/Parents Associations related to Dyslexia:

1. Greek Dyslexia Company (www.dyslexia.gr)
2. Parents of Children with Dyslexia and Learning Difficulties Unions" Pan-Hellenic Federation. (www.dyslexia-goneis.gr)
3. Pan-Hellenic Association for Dyslexia and ADT. (Email: ddPassociation@gmail.com)
4. Numerous relevant associations in various Greek cities. (www.dyslexia-athns.gr , mathisiakesdiskoliesdramas.blogspot.com)

All of the associations, companies or federations above, aim at informing the general public and concerned parents on matters of Dyslexia and Learning Difficulties, by organizing or participating in seminars, book presentations and conferences. They try to promote the rights of children with Dyslexia and Learning Difficulties by aspiring to change or improve the existing legal system. They can also act as aiding factors on the problems faced by students in their school life.

3. Knowledge about dyslexia and training needs

According to H. Magou's (Rhodes 2014) „Educators“ Opinions on Students with Dyslexia and Learning Difficulties“ Master Dissertation, the description given by non-special education concerning Dyslexia focuses mainly on the difficulties that these pupils face in writing, reading and in the comprehension of the written text. Although most teachers agree that Dyslexia is a sub-category of Learning Difficulties, a few mention that it is of inherent origin and that it is considered to be a brain dysfunction. Most of them recognize their need for further training on the specific subject and agree that it is best for the child to be called with the term dyslexic, so that it can receive a better and more efficient education. (Μάγνη Δ. (2014). «Χρηνοπαδαγογηθεό Σπληζηώζεο ηοι Δθπαηδεπηηθώι Αλαγηώι: Απόζεο ηοι Δθπαηδεπηηθώι γηα ηηπο Μαζεηέο κε Γπζηεμία θαη Μαζεζηαθέο Γπζηηνίεο», Μεηαπηηρρηαθή Δξηγαζία, Αξηζηηνηείεην Παλ/κην Θεο/θεο, Τκήκα Δπηηηεκέωι Πένηρνηηθέο Αγογήο θαη Δθπαίδεπζεο.

Another study, on a sample of 131 preschool educators, that took place in a municipality of Athens, indicated that most of the teachers of the sample (4,33) expressed the desire to attend educational seminars about Learning Difficulties and Behavioral issues. These topics have a direct connection to the difficulties that the teachers have in their everyday life in school and the necessity for specialized knowledge. (Κπηηαθή Σ. & Παξδάηε Μ. (2012) «Αλίρλεπζε ηοι Δπηηηεκέωι Αλαγηώι ζηελ Πέσηηβάζκηα Δθπαίδεπζε: Ζ Πεξίηηζε ηοι Αραγλώι», ζην: Πέθηηηθά ηηπ Δηεληθώλ Ηλζηηηηνύ ηη Δθαξκνζκέλεο Παηδαγογηθήο θαη Δθπαίδεπζεο (ΔΛΛ,Η.Δ.Π.ΔΚ.), 6ν Παλειώηηην Σπλέδεην, 5-7 Οθηοβξίηη 2012

According to Skoulidis, Panitsidou, Papastamatis & Balkanos" (2015) „...study about the training needs of special education teachers in the Attica Region, in order to formulate a

comprehensive proposal for a training programme based on teachers' recorded needs and suggestions. " (p2), only two out of ten educators that had attempted educational seminars in the past, found it really helpful in the classroom. Most of them answered that the help they gained was on an average level. The majority of the educators, of the sample, expressed the need to attend seminars focusing on school class managing problems. Furthermore, the educators expressed their preference for seminars that can take place into the school community so as a direct connection between the everyday class related problems and the specialist's opinions or suggestions about it, can be achieved. (Σθνπιίδεο Ε., Παληηζίδνπ Δ., Παπαζηακάηεο Α. & Βαηθαλόο Δ. (2015). «Υπνζηεξεξίδνληαο ηνπο Δθπαηδεπηεξνύο πνπ εμαόδνληαη ηα Δμααζηήηα Δηδηθή Δπαγγειαηηθή Δθπαίδεπζεο θαη Καηάξηηζε: Γηεμαύιεξε Δπηθνξσηηθή Αλαγλώλ». Πεξηνδεηό: Έμαπλα ηηελ Δθπαίδεπζε, η.3.

PORTUGAL:

1.1. Organization of the pre-service and in-service training

A) What are the characteristics of the primary school teachers pre-service education programs and curricula? Their length, when they are offered (at the graduate or undergraduate level), institution that sponsor them (university, college- do they follow the Bologna principles in higher education and how is it organized- school district, state education department or for-profit organization), admissions requirements, and curriculum emphases.

Pre-service training for teachers are being formulated according to the Bologna Process and a specific Portuguese legislation (Law 43/2007). The state (Ministry of Education) is responsible for formulating and implementing policies for infant, primary and secondary education, which includes definition of the teachers profile and roles.

Within the scope of the Bologna Declaration, higher education has been organized into three levels- undergraduate (first cycle), graduate (second cycle) and doctoral studies (third cycle) - which are usually referred to as the three cycle system (Bologna Working Group, 2005). Therefore, in Portugal primary school teachers must complete a three plus two year pre-service teacher-training program (first and second cycles) that includes a teaching practicum. This takes place in Higher education institutions, which includes "universities and polytechnics administered by public, non-public or cooperative institutions. Universities award first degrees, master's degrees and doctorates.

Polytechnic institutions award first degrees and master's degrees" (Ministry of Education, 2017). The first cycle leads to a qualification in Elementary Education which is obtained after successful completion of a study program with 180 – 240 ECTS credits (Bologna Working Group, 2005). Programs of the first cycle last typically three years. Specifically, as an example of a 3-year degree (first cycle of studies) in Elementary Education is the one from the University of Minho (for further information please visit <https://www.ie.uminho.pt/en/Ensino/licenciaturas/Pages/LicenciaturaemEducacaoBasica.aspx>): trains elementary education professionals capable of intervening in various educational

settings, by providing the adequate knowledge and skills that would enable them to: observe and evaluate different educational contexts within the area of early childhood and elementary education where they might develop their professional activity; build a global view on children and their life and learning contexts, developing skills for action in fields related to early childhood and elementary education; develop learning skills, critical and inventive thinking, intellectual curiosity and openness to diversity, in a perspective of lifelong training; access master's degrees in teaching pre-school and elementary and middle (5th-6th years) schools.

This cycle of studies confers on graduates in Elementary Education knowledge and skills that enable them to exercise various professional functions, particularly those that focus on the child and on the network services that assist the child. These may be associated to syllabus enrichment programmes, extracurricular activities and activities to support the integration of children in schools. (ie.uminho.pt)

The second cycle leads to a qualification in teaching in Pre-school and 1st level of Basic Education which is obtained after successful completion of a study program with 60 – 120 ECTS credits. This second cycle of studies can lead to different degrees in teaching. One example is the following (for further information please visit <https://www.ie.uminho.pt/en/Ensino/Pages/Master.aspx>)

The course of study leading to the degree of Master in teaching in Pre-school and 1st level of Basic Education, created within the framework of the implementation of the Bologna process, confers professional qualification for teaching in Preschool and the first Cycles of Basic Education, under the terms established by the legal system of professional qualification for teaching in preschool Education and in Basic and secondary Education (Decree-Law No. 43/2007, February 22, 1189/2010 Ordinance, of November 17).

This course continues the training obtained in degree in Basic Education, forming an integrated profile teachers, for these two Cycles of Basic Education. This new reality requires an integrated and appropriate training to a common faculty profile for these two levels of education, which is expected in the future will constitute a single one. This Master teaching professional (Initial Teacher Training) and includes an internship in a professional context, on which a report shall be prepared to defend in public testing. (ie.uminho.pt)

Portuguese universities confer the professional certificate and not just the academic degree.

B.) What are the characteristics of the primary school teachers in-service education programs and curricula? Their length, institution that sponsor them (university, college- do they follow the Bologna principles in higher education and how is it organized- school district, state education department or for-profit organization), admissions requirements, and curriculum emphases.

In-service teacher education is generally carried out through

(a) courses;

- (b) workshops;
- (c) a cycle of studies;
- (d) short-term actions short-term actions (Decreto-Lei n.º 22/2014).

To the accredited actions are attributed credits (required for advancement within a teaching career). In-service training for teachers are implemented by higher education institutions, by school clusters in training centers, by training centers of scientific or professional associations, and by central or local administration centers, all of them accredited by the Scientific and Pedagogical Council for In Service Education.

C.) Are the pre-service education programs and curricula at the university, college, school district, state education department or for-profit organization, assessed or credited by any type of external agency? All of the training programs both pre-service and in service that take place at the university, college, school district, state education department or for-profit organizations should be accredited by the Portuguese Scientific and Pedagogical Council for In Service Education.

Additionally, "following the recent development of quality assurance systems, namely those in the European space, the Portuguese state has decided to create the "Agência de Avaliação e Acreditação do Ensino Superior" (Agency for Assessment and Accreditation of Higher Education - A3ES), by Decree-Law no. 369/2007, of 5th November, with the purpose of promoting and ensuring the quality of higher education.

The Agency is a private law foundation, established for an indeterminate period of time, with legal status and recognized as being of public utility. The Agency is independent in its decisions which must take into account the guidelines prescribed by the State. The assessment and accreditation regime to be developed by the Agency is defined in Law no. 38/2007, of 16th August (<http://www.a3es.pt/en/about-a3e>).

Therefore, at the university level, the Agency A3ES assess and accredit study programs (pre-service education, as well as in-service training) and higher education institutions, as well as to audit and certify the internal quality assurance systems of institutions.

1.2. Address of issues related to literacy problems and dyslexia in pre service training

A) How are addressed, in the curricula of the pre-service education programs for primary school teachers issues related to understand and teach students with literacy problems/dyslexia?

The two cycles of studies in teaching provide curricular units related to literacy; usually dyslexia is a topic in a Curricular unit related to special needs.

B) Are there national legislation that provide guidelines to the organization of the curricula of the in-service training for primary school teachers?

Law 22/2014, legislates in service teacher training. However, it does not provide guidelines to the organization of the curricula or topics. Law 43/2007, legislates the pre service teacher training, but does not provides guidelines related to dyslexia.

1.3. Address of issues related to literacy problems and dyslexia in specialized training

A.) How are addressed, in the curricula of in-service education programs for primary school teachers, issues related to understand and teach students with literacy problems/ dyslexia?

1. At the university of Minho within the master degree in special education there is a curricular unit (30hours; mandatory) denominated Specific learning disabilities: Dyslexia.

2. At the Paula Frassinetti School of Education there is a in-service course denominated Dyslexia: Differentiating the psico-pedagogical intervention. 3. At the Dyslexia United, University of Trás-os-Montes e Alto Douro (UTAD) there are once in a while training for related to dyslexia.

B.) Are there specialized training in Dyslexia/ specific learning disabilities/ literacy problems at the university or college level, or at any other educational level? If yes, how is it organized?

There are no cycle of studies in Dyslexia.

C.) Are there national legislation that provide guidelines to the organization of specialized training for professions who to support students with dyslexia?

Specialized teacher training is legislated by law. However, it does not specify guidelines to the organization of specialized training for professions who to support students with dyslexia in particular. The universities have the scientific autonomy to organized the contents of a particular course.

2. Former projects, guides or publications that fit the requirements of the research

2.1. Projects and publications

A.) Are there national research projects related to dyslexia at the university, college or any other level? If yes, give a brief summary of it, results and social impact.

Projects funded by national scientific organizations (last 10 years):

1. EXPL/MHC-CED/2449/2013: Curriculum-based measurements to establish risk for specific reading disabilities for 4th grade: To a longitudinal comparison of results from 2nd to 4th grade of Basic Education. Funding from the Portuguese Foundation for Science and Technology. University of Minho, Research Center in Education (January 2014 -December 2014).

2. PTDC/CPE-CED/111430/2009: Using the curriculum-based measurements to establish risk for specific reading. Funding from the Portuguese Foundation for Science and Technology. University of Minho, Research Center in Education (March 2011-March 2013).

According to the following reference Martins, Ap.L., Santos, J., Oliveira, C., Marinho, C., Simões, M.J, & Costa, S. (2016, March). Using a Curriculum-Based Measurement to identify students at risk: Results from a longitudinal study. Poster, British Dyslexia Association 10th International Conference, Oxford, UK:

These two projects were conducted in the north of Portugal within a response to intervention educational framework. It was conducted a quantitative research in which we developed and tested a school-wide Curriculum-Based-Measurement (CBM) universal screening and progress monitoring system. Results from three academic years of the same students are giving us a longitudinal prospective about the differences in the reading comprehension development of students at risk and students who are not at risk. Additionally, we created foundations for evaluating the effectiveness of instructional programs, and to promote an early identification of students at risk for dyslexia.

Method: A quantitative longitudinal research was carried out within a population of 1400 students from 86 public school classes in Braga, Portugal, within three academic years. Data was collected using three CBM Maze probes two times a year and analyzed by descriptive, inferential and correlational statistics.

A preliminary longitudinal results shows that:

- 1) CBM Maze probe is economic, quick and easy to implement, with good acceptance and high levels of acceptance among teachers, students and parents.
- 2) The levels of the reading comprehension over the three school years reflects learning in the population.
- 3) Reading comprehension level gap between students who are not at risk and those who are at risk grows larger over time.
- 4) Students at risk had a decreasing growth rate over time.
- 5) Gender has impact on grade 4, with girls presenting better results.
- 6) At risk variable had impact on grade 1, 2 and 3.
- 7) Results of the probes had a high internal consistency.

Conclusion: These results serve as an example of a measure that can be used to evaluate reading progress as students move from one Tier to Tier 2 within a response to intervention framework. Additionally, shows that the average performance of students not at risk is almost twice than the average performance of those at risk in both applications along the three academic years, which shows that by not giving an official and adequate support the difference in scores between students at risk and those who are not grows throughout the academic years.

3. PTDC/SAU-NSC/113471/2009: A Visual view on the reading deficit in dyslexia. Funding from the Portuguese Foundation for Science and Technology. University of Coimbra, Instituto

Biomédico de Investigação de Luz e Imagem (IBILI/FM/UC) (2009). According to the following reference: Rodrigues, A.P., Rebola, J., Jorge, H., Ribeiro, M.J., Pereira, M., van Asselen, M., & Castelo-Branco, M. (2017). Visual Perception and Reading: New Clues to Patterns of Dysfunction Across Multiple Visual Channels in Developmental Dyslexia. *Clinical and Epidemiologic Research*, 58 (1), 309- 3017. DOI:10.1167/ iovs.16-20095.

<http://iovs.arvojournals.org/pdfaccess.ashx?url=/data/journals/iovs/935965/ on 06/26/2017>):

The specificity of visual channel impairment in dyslexia has been the subject of much controversy. The purpose of this study was to determine if a differential pattern of impairment can be verified between visual channels in children with developmental dyslexia, and in particular, if the pattern of deficits is more conspicuous in tasks where the magnocellular–dorsal system recruitment prevails.

Additionally, we also aimed at investigating the association between visual perception thresholds and reading. **Methods:** In the present case–control study, we compared perception thresholds of 33 children diagnosed with developmental dyslexia and 34 controls in a speed discrimination task, an achromatic contrast sensitivity task, and a chromatic contrast sensitivity task.

Moreover, we addressed the correlation between the different perception thresholds and reading performance, as assessed by means of a standardized reading test (accuracy and fluency). Group comparisons were performed by the Mann-Whitney U test, and Spearman's rho was used as a measure of correlation. **Results:** Results showed that, when compared to controls, children with dyslexia were more impaired in the speed discrimination task, followed by the achromatic contrast sensitivity task, with no impairment in the chromatic contrast sensitivity task.

These results are also consistent with the magnocellular theory since the impairment profile of children with dyslexia in the visual threshold tasks reflected the amount of magnocellular–dorsal stream involvement. Moreover, both speed and achromatic thresholds were significantly correlated with reading performance, in terms of accuracy and fluency. Notably, chromatic contrast sensitivity thresholds did not correlate with any of the reading measures.

Conclusions: Our evidence stands in favor of a differential visual channel deficit in children with developmental dyslexia and contributes to the debate on the pathophysiology of reading impairments.

List 10 national publications related to understand and teach students with dyslexia?

1. Vaz, A.P.F, Martins, A.P.L., & Correia, L.M. (2017). Monitorização do progresso do aluno na identificação de risco na leitura [screening students at risk in reading using curriculum-based assessment]. *Cadernos de Pesquisa [Journal of Research]*, 47(164), 612-630. DOI 10.1590/19805314

2. Carreiro, R. M. (2015). A Dislexia: Manual de instruções [Dyslexia: instructional manual]. Lisboa: Psiclínica.

3. Lima, R. & Tavares, C. (2012). Dislexia: Atividades de conhecimento fonológico [Dyslexia: phonological activities]. Lisboa: Lidel

4. Vale, A. P., Sucena, A., Viana, F. L. (2011). Prevalência da Dislexia entre Crianças do 1º Ciclo do Ensino Básico Falantes do Português Europeu [Prevalence of Dyslexia among first grade students who speak European portuguese]. Revista Lusófona de Educação [Lusófona Educational Magazine], [S.l.], 18 (18). Available in: <<http://revistas.ulusofona.pt/index.php/rleeducacao/article/view/2562>>.

5. Martins, A.P.L., Santos, J., Oliveira, C., Lages, M., Costa, S., & Almeida, M. (2014, Dezembro). Um estudo longitudinal sobre a monitorização-com base-no-currículo para a identificação de alunos em risco de dislexia [A longitudinal study about the use of curriculum-based measurement as a way to identify students at risk for dyslexia]. In A.P.L. Martins & F.A.C. Tavares (Org.), Desafiando os Caminhos da Educação Inclusiva em Cabo Verde: Atas do 1º Congresso Cabo-verdiano de Educação Inclusiva [Challenging the inclusion path in Cape Verde: Proceedings of the 1st conference on inclusive education] (pp. 193-202). Universidade de cabo Verde e Centro de Investigação em Educação. ISBN: 978-989-8707-09-3.

6. Mendonça, R. & Martins, A.P.L. (2014). Identificação de alunos em risco de apresentarem dislexia: Um estudo sobre a utilização da monitorização da fluência de leitura num contexto escolar [A study of the use of reading fluency monitoring in a school context]. Revista Brasileira de Educação Especial [Brazilian Journal of Special Education], 20(1), 9-20.

Available on: http://www.scielo.br/scielo.php?script=sci_issuetoc&pid=1413-653820140001&lng=pt&nrm=iso

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1. Davis, R. (2010). *O Dom da dislexia [The gift of Dyslexia]*. Alfragide: Lua de Papel.
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3. Kathleen, A. H. (2008). *Compreender a dislexia: Um Guia Para Pais E Professores [Understanding Dyslexia: A guide for parents and teachers]*. Porto: Porto Editora.
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2.1. Guides

A) How is organized at a national and school level the support of students with dyslexia within the educational system? How is this support related to the support to other students with special needs? Students with special educational needs are supported in regular inclusive schools according to what is stipulated in Law 3/2008. With the implementation of Decree-Law No. 3/2008, the pupils covered by special educational needs were restricted to those with permanent needs, redirecting the available specialized resources to them. Law 3/2008, defines the specialized support given to pupils with permanent special educational needs and is implemented via the following measures:

- Personalized pedagogical support;
- Individual curriculum adjustment;
- Adjustment to the enrolment process;
- Adjustment to the assessment process;
- Individual specific curriculum;
- Support technology.

According to the law 3/2008, for those students which special educational needs prevent them from acquiring the learning and competencies defined in the common curriculum, the school should develop an Individual Education Program and three years before they reach the age limit for compulsory education complement it with an Individual Transition Plan (ITP). Specialized support is provided in state, private and co-operative pre-school, basic education and upper-secondary education and aims to create the conditions for the adjustment of the educational process to pupils' special educational needs. Teachers from the special education

recruitment group, with specialized training in specific areas, are placed in schools to promote support activities for students with permanent special educational needs” (European Agency for Special Needs and Inclusive Education, n/d).

B) Are there national education/school legislation that provides guidelines to the organization of support to students with dyslexia? If yes, How is organized the educational support provided to students with dyslexia?

No. Students with dyslexia are supported under law 3/2008

C) What is the definition of Dyslexia that is used in your country by the school system?

There is no legal definition of Dyslexia in Portugal. The Portuguese Association of Dyslexia disseminates the following definition:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge (International Dyslexia Association, 2003).

At the University of Minho we also disseminate and use the following definition:

Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifest by variable difficulty with different forms of language, often including, in addition to problems with reading, a conspicuous problem with acquiring proficiency in writing and spelling. (Lyon Shaywitz, & Shaywitz, 2003, p. 2)

D.) Are there professional/parents associations related to Dyslexia? Do these associations provide guidelines, advocacy or any training on dyslexia?

There are two professional/parents associations related to Dyslexia:

1. DISLEX-Associação Portuguesa de Dislexia (Portuguese Association of Dyslexia)

<http://dislex.co.pt/>

2. APPDAE- Associação Portuguesa de Pessoas com Dificuldades de Aprendizagem Específicas

<http://www.appdae.net/>

3. knowledge about dyslexia and training needs

3.1. Conduct a data collection

A) What do primary school teachers in Portugal know about Dyslexia and what training needs do they have?

According to a study developed at the University of Minho, which aimed to find out if educators and primary teachers are scientifically prepared to detect signs of Dyslexia, identifying, assessing and intervening with their students in order to prevent and reduce these difficulties. Therefore, 1031 data were collected, 342 educators and 689 primary teachers of the northern of Portugal working in public schools, IPSS or Private. The work followed a quantitative methodology using the semi-open questionnaire, consisting mainly of closed questions.

Overall, the results seem to allow us to conclude that:

- 1) educators and teachers have a positive level of knowledge about dyslexia;
- 2) there is no statistically significant difference between educators and teachers regarding the understanding of dyslexia;
- 3) there is no statistically significant relationship between age and the level of training of the participants, whether graduate in Special Education, master's degree in Special Education, other formations in Special Education, or specific training in Dyslexia;
- 4) there is no statistically significant relationship between the professional experience of participants and the level of education, whether graduate in Special Education, master's degree in Special Education, other formations in Special Education, or specific training in Dyslexia;
- 5) there is a statistically significant relationship between the level of training of participants and their knowledge about dyslexia, more specifically the analysis revealed that having more knowledge about dyslexia is associated with having a postgraduate degree in Special Education, other formations in Special Education or specific training in Dyslexia;
- 6) There is a statistically significant relationship between those who have direct contact with Special Education and / or Dyslexia and their knowledge about Dyslexia, more specifically, the analysis indicated that having more knowledge about Dyslexia is associated with having children / students with Special Educational Needs and / or children / students with Dyslexia, or family / friends with Special Needs;
- 7) the relationship between those families / friends with Dyslexia and knowledge about Dyslexia is marginally significant. That is, greater knowledge about Dyslexia tends to be associated with having family / friends with Dyslexia;
- 8) there is no statistically significant relationship between those with Special Needs and / or Dyslexia and their knowledge of Dyslexia.

ROMANIA:

The Desk research in Rumania aims to collect any useful information about dyslexia, all existing training tools, previous projects, articles and guides in the field in the countries involved in the project. In particular, it involves finding and analyzing the relevant documents, legal acts, ministerial regulations concerning the rules, requirements and characteristics of available learning outcomes confirmation and official certification of qualifications, examples of common and good practice in each of the partner countries.

1.1. Organization of the pre-service and in-service training

- a) What are the characteristics of the primary school teachers, psychologists, psychiatrists pre-service education programs and curricula?
- Their length, when they are offered (at the graduate or undergraduate level), institution that sponsor them (university, college- do they follow the Bologna principles in higher education and how is it organized- school district, state education department or for-profit organizations), admissions requirements, and curriculum emphases.

Pre-service education programs for specialists in the field of SLD is compulsory through universities. The most common educational training path is attending Psychology Department or Special Psycho-pedagogy Department - bachelor level of 3 years duration according to the Bologna system. For an improved working skills and professionalization it becomes necessary a relevant master with a duration of 2 years usually.

For our theme, becomes relevant higher education of special education teachers, support teachers, speech therapists which is attended through special psycho-pedagogy university studies. We consider these graduates better prepared for teaching and rehabilitation process of students with SLD due to the study subjects for each university an.

Here is a curricula example from Babes-Bolyai University, Specialization: Special Psycho-pedagogy, 3 years of study

<http://psihoped.psiedu.ubbcluj.ro/index.php/fisele-disciplinelor>



1 st Year, Bachelor Level	2 nd Year, Bachelor Level	3 rd Year, Bachelor Level
<p>PLR1061 General Psychology and Personality Psychology PLR1062 Introduction to Developmental Psychology PLR1063 Psychology of Education PLR2101 Fundamentals of Special Psycho-pedagogy PLR2201 Psychology of development in the context of disability PLR2202 Technology Information, Communication and Access Technologies PLR2203 Observational practice in public and private institutions PLR3206 Pedagogy 1: Fundamentals of Pedagogy. Curriculum Theory and Methodology PLR2102 Elements of Anatomy, Physiology and Genetics PLR1072 Introduction to Psychiatry PLR2204 Social Psychology of People with Disabilities PLR2205 Social Assistance for Persons with Disabilities LLU 1 Foreign Language - English LLU 1 Foreign Language - French PLR 2203 Sports</p>	<p>PLR2301 Psycho-pedagogy of Intellectual Deficit PLR2302 Introduction to Speech Therapy PLR2303 Methodology of Psycho-Pedagogical Research PLR3307 Theory and Methodology of Training/ Teaching. Evaluation Theory and Methodology PLR2401 Psychological Diagnosis for People with Disabilities PLR2402 Psycho-pedagogy of Visual Deficiencies PLR2403 Psycho-pedagogy of Hearing Deficiencies PLR2404 Psycho-pedagogy of Motor Deficiencies PLR2304 Psycho-pedagogy of Emotional and Behavioural Disorders PLR2305 Practical stage PLR2405 Psycho-pedagogy of early intervention PLR2501 Methods and Techniques for Complex Assessment of Children with Special Education Needs PLR2407 Braille System</p>	<p>PLR2408 Didactics of Special Psycho-pedagogy PLR2502 Educating People with Multiple Disabilities PLR2503 Methods and Techniques for Complex Assessment of Children with Cognitive Disabilities PLR2504 Special Techniques for Language Therapy PLR2505 Pedagogical practice in compulsory pre-university education (I) PLR2509 Computer Assisted Training PLR2601 Psycho-pedagogy of children with learning difficulties PLR2602 Methods and Techniques for Recovering Visual Impaired Persons PLR2603 Methods and Techniques for Recovering Hearing Impaired Persons PLR2604 Counselling People with Disabilities and their Families PLR2605 Pedagogical practice in pre-university education (II) PLR2608 Classroom Management PLR2506 Alternative and Augmentative Communication Systems PLR2507 Clinical Psychology of People with Disabilities PLR2606 Individual and Group Psychotherapy for Persons with Disabilities PLR2607 Occupational Therapies for People with Disabilities PLR2508 Speech and Gesture Language PLR2609 Evolutionary Models of Disabilities-Functionality and Adaptation</p>

Master level	
Master title: Management, Counselling and Psycho-pedagogical Assistance in Inclusive Institutions	
1st Year	2nd Year
PMR2201 Management of Inclusive Institutions and Organizational Diagnosis	PMR2215 Methodology of Psycho-pedagogical and Clinical Research
PME2202 Methods and Techniques of Psycho-pedagogical Assessment	PMR2216 Promoting Mental Health in Children and Adolescents
PMR2203 School and Professional Orientation of Disabled	PMR2217 Psycho-pedagogical Interventions in Autistic Spectrum Disorders
PMR2229 Assisted Animal Therapies and Activities	PMR2218 Practical Training in Management of Inclusive Institution
PMR2208 School Counselling	PMR2222 Inclusion and Psycho-pedagogical Intervention in the Context of Emotional Disorders
PMR2232 Systems for Identifying and Supporting High-Performance Children	PMR2223 Screening and Intervention Actions in School Violence
PMR2210 Therapy for Children with Learning Difficulties	PMR2224 Practical Training in Counselling and Psycho-pedagogical Assistance
PME2211 Psycho-pedagogical Interventions in Down Syndrome	PMR2225 Research-Action Projects and Case Studies
PMR2205 Art-Therapeutic Techniques applied to People with Disabilities	PMR2219 Counselling and Psychotherapy of People with Disabilities and their Families
PMR2206 Therapy of Articular and Phonological Disorders	PMR2221 Complex Assessment and Therapy of People with Multiple Disabilities
PMR2207 Social Investigation and Quality of Life for People with Disabilities	PMR2227 Typology of Interpersonal Relations and Conflict Resolution Management
PMR2212 Psycho-pedagogical Intervention Programs in Children with ADHD	PMR2220 Organizational Behaviour in Inclusive Institutions
PMR2213 Psychomotor Education and Rehabilitation	PMR2226 Rational-Emotional and Behavioural Education / Therapy
PMR2230 Psychobiology of Sexuality - Applicative Models	PMR2231 Applications of Positive Psychology in Inclusive Institutions

Master level

Master title: Language Therapy and Educational Audiology

1st Year	2nd Year
PMR2101 Fundamentals of Acoustic Physics PMR2102 Language Psychology PMR2103 Articular and Phonological Disorders Therapy PME2104 Methods and Techniques of Psycho-pedagogical Assessment PMR2108 Clinical Audiology	PMR2115 Educational Audiology PMR2116 Eating, Drinking, Swallowing Disorder Therapy PMR2117 Methodology of Psycho-pedagogical and Clinical Research PMR2118 Practical Training in Educational Audiology
<p><u>PMR2109 Therapy of Dyslexia, Dysgraphia and Dyscalculia</u></p> PMR2110 Practical Training in Speech Therapy PMR2111 Language Assessment Methods PMR2105 Complex Therapy in Maxillo-Facial Pathology PMR2106 Neurobiology of Audiology and	PMR2122 Research-Action Projects and Case Studies PMR2123 Language Disorders in Psychopathology PMR2124 Communication Techniques for Children with Multiple Disabilities PMR2125 Aural and Verbal Therapies PMR2119 Art-Therapeutic Techniques Applied to People with Language Disorders
Phonation PME2127 Early Intervention in Language and Communication Disorders PMR2112 Voice and Speech Disorders Therapy PMR2113 Early Intervention in Hearing Deficiencies PMR2114 Psycholinguistic Elements	PMR2120 Evaluation and Complex Therapy of People with Multiple Disabilities PMR2121 Counselling and Psychotherapy of People with Language Disorders PMR2126 Coaching Communication Skills PMR2107 Psychomotor Rehabilitation in Language Therapy PMR2128 Therapy of Neurological Based Disorders

As it can be observed, only during master studies, future professionals are introduced and trained into the topic of therapy addressed to SLD. Probably, other study disciplines trigger some concepts, definitions, theories, general intervention principles regarding SLD during college.

b) What are the characteristics of the primary school teachers, psychologists, psychiatrists in-service education programs and curricula?

- Their length, institution that sponsor them (university, college- do they follow the Bologna principles in higher education and how is it organized-school district, state education department or for-profit organization), admissions requirements, and curriculum emphases.

NGO's and professional associations offer, from time to time and for a fee, in-service training courses on this topic. We cannot say more about in-service education programs and curricula, because, so far, there are not visible on Romanian educational market.

c) Are the pre-service education programs and curricula at the university, college, school district, state education department or for-profit organization, assessed or credited by any type of external agency?

In Romania, any institution (body governed by state / public law or private), such as university, college, teachers' NGO's, parents' NGO's, school district willing to provide pre-service and in-service education programs must authorise and licence each training programme / course. Taking into account the number of training hours, theory, practice, type of learning (face to face sessions, blended learning), each training programme is licenced with a certain number of credits. In educational field, each teacher must acquire 90 credits/ 5 years and there courses / training programs are paid by the school due to our National Education Law.

ARACIS is the external agency assessing the quality on pre-service education programs offered by universities at each 5 years.

1.2. Address of issues related to literacy problems and dyslexia in pre service training

a) How are addressed, in the curricula of the pre-service education programs for primary school teachers, psychologists, psychiatrists, issues related to understand and teach students with literacy problems/ dyslexia?

b) there national legislation that provide guidelines to the organization of the curricula of the in-service training for primary school teachers, psychologists, psychiatrists?

- **Romanian National Education Law No. 1/ 2011** provides general guidelines and principles for initial and in-service teacher training;

- **Law No. 6 from 18th of January 2016** to complete National Education Law No. 1/ 2011;

- **The Methodology for Insuring the Support for Pupils with SLD** approved by the Order of Ministry of Education No. 3124/2017.

All these regulations will be detailed in the next sections.

1.3. Address of issues related to literacy problems and dyslexia in specialized training

a). How are addressed, in the curricula of in-service education programs for primary school teachers, psychologists, psychiatrists, issues related to understand and teach students with literacy problems/ dyslexia?

There is little or even none with referral to the specialized training curricula for primary school teachers, psychologists, psychiatrists, issues related to understand and teach students with literacy problems/ dyslexia.

An NGO (The Romanian Association for Children with Dyslexia / Asociatia Romana pentru Copii Dislexici located in Targu Mures, Mures County) organises at request and for a fee, training courses (3-4 days, face to face training session) mainly in the field of using Meixner Method as a rehabilitation process of the student identified with SLD.

b). Are there specialized training in Dyslexia/ specific learning disabilities/ literacy problems at the university or college level, or at any other educational level? If yes, how is it organized?

Unfortunately, there is no specialized training in Dyslexia/ specific learning disabilities/ literacy problems at the university or college level. Probably it will take some time to develop and authorize since the official recognition of these SLD in Romania is recent.

c). Are there national legislation that provide guidelines to the organization of specialized training for professions who to support students with dyslexia?

Romanian National Education Law No. 1/ 2011 provides general guidelines and principles for initial and in-service teacher training.

More specific, it's Law No. 6 from 18th of January 2016 to complete National Education Law No. 1/ 2011 which explicitly introduces articles and sections for students with specific learning disabilities. So, pupils' with SLD education is made through established methods, techniques and adaptations. They are integrated in mainstream / normal schools.



The methodology for insuring the support for pupils with SLD had to be published 90 days after Law No. 6/ 2016, but it was published only one year later, in 20th of January 2017 through the Order of Ministry of Education No. 3124/2017.

Chapter IV is dedicated to teacher in-service training as fundamental element to ensure appropriate intervention for students with SLD.

The Ministry of National Education undertakes all the necessary steps for introducing SLD notions into the in-service teacher training courses focused on psycho-pedagogy of SLD. Schools, based on needs analysis, establish the objectives and types of continuous training, including by professional conversion, for their own employees under the conditions stipulated by the National Education Law no.1 / 2011.

Among the objectives of the training programs are the following:

- a) raising awareness of SLD management process within schools;
- b) knowledge about characteristics of each SLD, both because such features justify the specific interventions provided by law, and they consent for building an integrated approach of SLD;
- c) the main tools that educators / teachers may use for the early detection of SLD risk;
- d) teaching methods and techniques and compensatory strategies;
- e) classroom management with SLD;
- f) appropriate assessment forms and scoring for students diagnosed with SLD;
- g) different types for applying the teaching and educational methods provided in the personalised educational plan;
- h) guidance and support for the follow-up of studies of these students;
- i) analyse of case-studies, problems and possible solutions;
- j) collaboration between teachers / support teachers / psychologists / speech therapists / physicians and SLD student's family.

2. Former projects, guides or publications that fit the requirements of the research

2.1. Projects and publications

a) Are there national research projects related to dyslexia at the university, college or any other level? If yes, give a brief summary of it, results and social impact.

In our country the first national research on dyslexia was carried out, through the project „Go further by reading”, by the Romanian Association for Dyslexic Children and OMV Petrom over 5 months (November 2011 – March 2012). It was published only in August 2012.

The study was conducted to find out the incidence of this disorder in Romania and among children up to 11 years of age, on a national sample of 2,036 people, namely parents, teachers and specialists who did therapy with dyslexic children. At the same time, it aimed to identify the difficulties encountered by parents, teachers and specialists in finding the best solutions to support them, thus helping the dyslexic child in Romania.

Among the population there was an incidence of 25 cases per 10,000 households, as only 15.5% of Romanians heard about dyslexia.

According to the study, on average, in a year, specialists deal with 650 children in schools and 75 children in private practice. Also, one in 6 dyslexic children attending specialised therapy, in one year, are new cases of dyslexia, which may mean that diagnosis is more accurate than in previous years, or that the number of dyslexic children is rising.

Moreover, according to the research, about 4 out of 10 children surveyed by a specialist are dyslexic, and 40% of them are aged between 5 and 8 years and 60% between 9 and 11 years. At the same time, the interviewed primary teachers reported they had on average 3 dyslexic children compared to an average of 22 children in a class. In the opinion of most of the interviewed teachers, dyslexic children need more attention than other children because they live with frustration or fear, and more than half of specialists believe that lack of specific teaching methods and lack of therapy can lead, over time, to self-isolation, loss of self-esteem and discrimination of the dyslexic child.

The Romanian study also shows that while 80% of the interviewed parents included their children into speech therapy once a week, only 28% go to the psychologist weekly, and 12% have never reached a specialist. The main reasons for this are the lack of money, time and insufficient information among parents, as the study shows.

Therapy with speech therapists and psychologists is an important factor for improving the lives of dyslexic children. The Romanian study shows that by therapy



60% of dyslexic children on the lists of interviewed specialists significantly improve their reading abilities and quality of life by the end of primary school. But although 68% of specialists recommend that the frequency of therapy be higher than once a week, only 43% of them say that dyslexics even do therapy a few times a week.

At present, 63% of the dyslexic children under the supervision of a specialist have, in addition to reading disability (dyslexia), writing disorders (dysgraphia) and 45% and calculus disorders (dyscalculia).

The study also shows that 81% of specialists believe that the integration of dyslexic children into primary education is the best educational option to reduce the symptoms of the disorder and to prevent the difficulties of social integration of the future dyslexic adult. Thus, the dyslexic child should be accepted in integrative classes and supported to develop on the basis of their own abilities.

44% of the interviewed parents are generally satisfied with the support provided by the teachers. Some parents, however, state that their primary children are not given more attention and do not apply specific teaching and assessment methods. Moreover, there are parents who claim that teachers consider children to be smart but lazy, treating them as children with handicap or marginalizing them. This, in the context of the fact that only 43% of teachers are somewhat aware of dyslexia and the options they have to support dyslexic children.

Furthermore, specialists claim that extra work is extremely important for a dyslexic child. In this respect, the quantitative study shows that 77% of the interviewed parents spend at least two hours a day to do extra exercises with their dyslexic children, while 55% of the teachers say they do not have the resources to work with dyslexic children.

This study has managed to capture the reality we face in the therapy process of dyslexic children. Because of this, the study revealed the need to train specialists in Romania and develop standardized tests to diagnose dyslexia. Many parents do not know they have dyslexic children, or children are not diagnosed, although they have all the symptoms of this disorder.

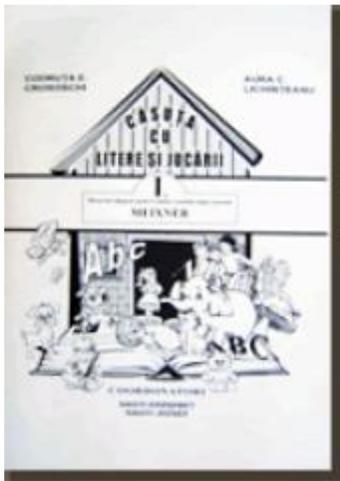
Romanian web sources:

<http://dislexic.ro/campanii/campanie-2011/cercetare-nationala/>

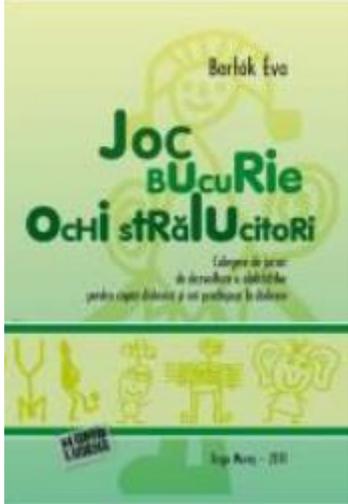
<https://timpolis.ro/arhiva/articol-studiu-national-doar-15-dintre-romani-stiu-ce-inseamna-a-fi-dislexic-22983.html>

<http://suntfericita.manager.ro/dislexia-in-romania-3851.htm>

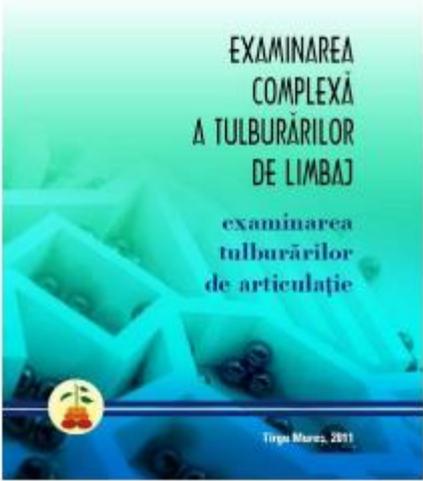
National publications related to understand and teach students with dyslexia?

	<p>Authors: Gagy Erzsébet (coord.), Bartók Éva, Cseh Ágnes, Crososchi Codruța, Deák Győrfi Emese, Öllerrer Gabriella, Demeter Éva Andrea</p> <p>Title: Eu citesc mai bine!</p>
	<p>Indrumător pentru tratarea tulburărilor lexico-grafice</p> <p>(I read better. Guideline for treating dyslexia and dysgraphia)</p> <p>1st Edition Published in Târgu Mureș, 2005</p>
	<p>Authors: Codruța Crososchi, Aura Lichințeanu</p> <p>Title: Căsuța cu litere și jucării. Abecedar întocmit după principiile metodei Meixner</p> <p>(The box with letters and toys; based on the principles of the Meixner method)</p> <p>Published in Târgu Mureș, 2006</p>

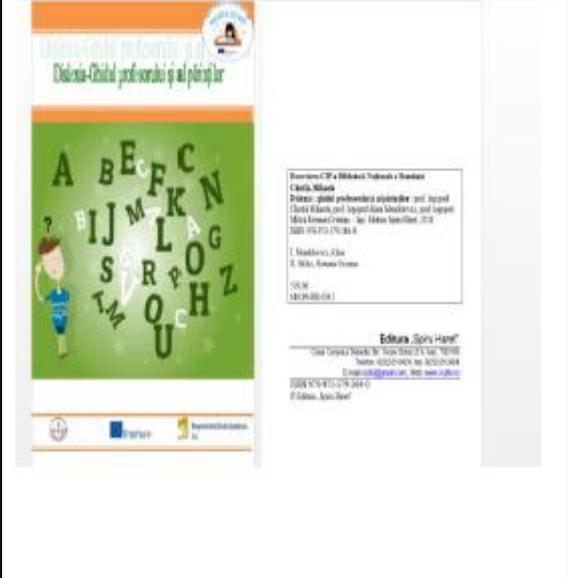


	<p>Authors:</p> <p>Bartók Éva (coord.), Gagy Erzsébet, Crososchi Codruța, Cseh Ágnes, Deák Györfi Emese, Fülöp Gabriella</p> <p>Title:</p> <p>Eu citesc mai bine! Îndrumător pentru tratarea tulburărilor lexico-grafice (I read better. Guideline for treating dyslexia and dysgraphia)</p> <p>2nd Edition Published in Târgu Mureș, 2010</p>
	<p>Author:</p> <p>Angela Pop</p> <p>Title:</p> <p>Jocuri cu sunete și cuvinte. Jocuri și exerciții pentru educarea auzului fonematic (Games with sounds and words Games and exercises for educating phonematic hearing)</p>
	<p>Author:</p> <p>Bartók Éva</p> <p>Title:</p> <p>Joc – bucurie - ochi strălucitori. Culegere de jocuri de dezvoltare a abilităților pentru copiii dislexici și cei predispuși la dislexie (Play - joy - bright eyes.)</p> <p>A collection of skills development games for dyslexic children and those predisposed to dyslexia)</p> <p>Published in Târgu Mureș, 2011</p>



 <p>CROSOSCHI CODRUȚA CSERNIK-VASS KÁRMÉN</p> <p>EXAMINAREA COMPLEXĂ A TULBURĂRILOR DE LIMBAJ</p> <p>examinarea tulburărilor de articulație</p> <p>Târgu Mureș, 2011</p>	<p>Authors: Codruța Crososchi, Csernik-Vass Kármén</p> <p>Title: Examinarea complexă a tulburărilor de limbaj. Examinarea tulburărilor de articulație (Complex assessment of language disorders. Assessment of articulation disorders)</p> <p>Published in Târgu Mureș, 2011</p>
 <p>Codruța CROSOSCHI</p> <p>CĂSUȚA CU LITERE ȘI JUCĂRII</p> <p>material adaptat pentru limba română după metoda Meixner</p> <p>Coordonatori RODOLĂN Katalin + HODICSKA Tiborné</p> <p>Târgu Mureș – 2012</p>	<p>Author: Codruța Crososchi</p> <p>Title: Căsuța cu litere și jucării Material adaptat pentru limba română după metoda Meixner (The box with letters and toys; based on the principles of the Meixner method)</p> <p>2nd Edition</p> <p>Published in Târgu Mureș, 2012</p>
 <p>HODICSKA Tiborné</p> <p>ASBÓTHNÉ KRISTON Viktória</p> <p>GHID METODOLOGIC</p> <p>pentru utilizarea abecedarului „Căsuța cu litere și jucării”, material adaptat pentru limba română după metoda Meixner</p> <p>Târgu Mureș – 2013</p>	<p>Authors: Hódicska Tiborné, Asbóthné Kriston Viktória</p> <p>Title: Ghid metodologic pentru utilizarea abecedarului "Căsuța cu litere și jucării", material adaptat pentru limba română după metoda Meixner (Methodological guide for the use of the "The box with letters and toys" textbook adapted for Romanian Language based on the principles of the Meixner method)</p>



	<p>Authors:</p> <p>Chirilă Mihaela, Alina Mendelovici Milici Roxana-Cristina</p> <p>Title:</p> <p>Dislexia – Ghidul profesorului si al parintilor, (Dyslexia – teachers and parents guide)</p> <p>Published in Iași, Erasmus+ Project “Hidden stars” 2014-1-TR01-KA201-013001.</p>
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Source: <http://www.copiidislexici.ro/ro/megielen-t-konyvek>

There are also a lot articles and useful information (definition of dyslexia, symptoms, forms, education principles, data contacts, photos, events - conferences, students' activities, workshops for specialists – for SLD lobby) for parents, teachers and professionals regarding the topic of SLD on Romanian web-sites:

<http://www.copiidislexici.ro/ro/categories>

<http://dislexic.ro/>

<http://www.academia.edu/7368448/Dislexia>

<http://www.umfcv.ro/CCOP-terapia-dislexiei>

2.2. Guides

A) How is organized at a national and school level the support of students with dyslexia within the educational system? How is this support related to the support to other students with special needs?

B). Are there national education/school legislation that provide guidelines to the organization of support to students with dyslexia? If yes, How is organized the educational support provided to students with dyslexia?

As mentioned before, Law No. 6/2016 and the Methodology for insuring the support for pupils (published by the Order of Ministry of Education No. 3124/2017) regulates the organization, at national and school level, of the support of students with dyslexia within the educational system.



In particular, this methodology establishes the appropriate assessment procedures for identifying specific learning disabilities (dyslexia, dysgraphia and dyscalculia) of pupils as well as the type of intervention to ensure individualized and personalized learning process for them. It points out, even from the second paragraph, that it's clearly not addressed for students with learning difficulties. There are specific educational methodologies and laws for pupils identified with learning difficulties – usually they are considered students with special educational needs.

Depending on parents' choice, they (special education needs students) can be integrated in normal schools (with the appropriate educational support offered at least, theoretically!!!) or can attend a special school. Mainly in Romania, special schools are for students with mental retardation (at least $QI= 55$, meaning moderate mental retardation); but also other associated disorders are taken into account (cerebral palsy, genetic disease, congenital malformation, autism, ADHD etc.) when deciding to enrol a student into a special school. There are also, special schools for deaf and blind students, but only in large cities like Bucharest, Cluj-Napoca, Timișoara.

Returning to our matter of interest – the educational support for students with SLD – we can mention some considerations:

- ✓ Students with SLD are integrated into mainstream (normal) schools;
- ✓ There are officially identified with SLD after their parents / legal representatives address to Centre for Resources and Educational Assistance for each Romanian County for the pupil's school and professional orientation certificate;
- ✓ After obtaining the school and professional orientation certificate, parents / legal representatives address to school in order to draw up the personalized educational plan (PEP);
- ✓ The PEP, to which the pupil will have access to the school and the specific objectives of psycho-pedagogical intervention within and outside the school, includes:
 - a. Student's personal data
 - b. Typology of the disability (according to diagnosis)
 - c. Recommendations on personalized intervention
 - d. Compensatory instruments
 - e. Dispensational measures
 - f. Personalized assessments during semesters and National Evaluations Tests
- ✓ The obligation to adapt the educational process to the student's needs with the SLD is the responsibility of the educational unit only for the pupils for whom the school and professional orientation certificate has been submitted;



- ✓ With the prior approval of the school administration board and the recommendation of the specialist, on a case-by-case basis, students with SLD may use compensatory materials or tools, including assistive devices and access technologies, and benefit from adapted evaluation during the semesters;

- ✓ The compensatory measures that can be provided for students with SLD are:
 - a. computer / tablet with software - vocal synthesizer, which transforms the reading homework / task into a listening one;
 - b. recording device that allows the pupil to complete his / her notes during the lesson (tablet, tape recorder, phone etc.), in compliance with the law;
 - c. mental maps, conceptual maps of the study unit (usually created by the teachers);
 - d. digital textbooks and books (audio-books);
 - e. digital dictionaries and vocabularies;
 - f. charts, lists, panels with months of the year, seasons, days of the week, alphabet, formulas, definitions, etc .;
 - g. texts with images, syntheses, schemes;
 - h. the presence of the teacher (involvement) to read the text of the textbook, the tasks to be solved, multiple answer questionnaires;
 - i. computer with a spell-checker software, which allows for correct texts to be produced without additional effort to read over and correct mistakes;
 - j. software for creating mental maps, conceptual maps;
 - k. appropriate photocopies of the study unit;
 - l. digital dictionary (on tablet or computer);
 - m. computer to facilitate computing operations;
 - n. other less developed technological tools, such as the Pythagorean Table, mathematical formulas, conceptual schemes, etc .;
 - o. others, at teacher's discretion.

- ✓ The dispensing measures that can be provided for students with SLD are:
 - a. dispensing the read out loud in front of the class;
 - b. dispensing the autonomous reading of texts whose length and complexity are incompatible with the child's ability level;
 - c. dispense / avoid the excessive amount of homework;
 - d. dispense / avoid memorizing poems, formulas, tables, definitions;
 - e. dispensing foreign language learning in written or read form;
 - f. dispense / avoid performing several tests / evaluations shortly one after another;
 - g. dispense / avoid fast writing after dictation;
 - h. dispense / avoid written notes in classroom;



- i. dispense / avoid writing after blackboard and re-copying texts
 - j. dispense / avoid time pressure while solving written school tasks;
 - k. dispense / avoid homework handwriting for severe cases of dysortographia (it is accepted computer writing or parental transcript);
 - l. dispense / avoid memorize multiplication table;
 - m. dispense / avoid texts coping (eg. mathematical problems) from blackboard or textbooks; use instead prepared texts, printed and glued on the notebooks (or work directly on the cards);
 - n. others, teacher's decision.
- ✓ Adapted (personalised) assessment is ensured during the semesters as follows:
- a. tests will be announced at least 24 hours in advance;
 - b. additional time (30 - 60 minutes) is provided or fewer requirements are ensured;
 - c. tasks are provided and required in digital form;
 - d. ensure that the teacher reads the tasks to be performed during the tests. The topics are read in turn, in the order in which the tasks are being worked out;
 - e. compensatory instruments shall be ensured both in written and oral assessments;
 - f. oral tests will be provided as an alternative to written tests (especially in foreign languages);
 - g. during oral examinations, students' lexical and expressive abilities will be taken into account;
 - h. depending on the situation, evaluations will be designed to reduce handwriting (e.g. exercises with fill into space, multiple-choice questionnaires, etc.);
 - i. final grade will take into account the content, not the form;
 - j. there is allowed (ensured) the use of pocket / office computers, pictograms, Pythagorean Table, maths formula, etc.
- ✓ Adapted procedures during the national assessment for the 8th grade LDS students and the high school graduates (Bacalaureat, in Romanian language) consists in:
- a. providing additional time to submit the test;
 - b. in case of dyslexic students, the reading of the topics is assured by an assistant teacher. The tasks are read in turn, in the order in which each task is being worked out;
 - c. in case of students diagnosed with dysgraphia, the student is entitled to oral evaluation or he / she is allowed to dictate the content of his/her work to an assistant teacher;
 - d. in the case of students identified with dyscalculia, it is allowed the use of pocket / office computer, Pythagorean Table, maths formula, etc.

So, for a better comprehension, **some similarities and differences between the support to SLD students and the support to other students with special needs are listed below:**

SLD students	Students with special needs
- Are enrolled / integrated only in normal schools	- Are enrolled in normal or special schools
- Identified around the age of 8 years old	- Age is not important; they can be identified from early intervention (before 3) till adulthood
- Require specific assessment tools and trained professionals on the topic of SLD - Normal intellect	- QI is very important, 70 is considered limit intellect, under 70 there are mental retardation forms
- Specific classroom Intervention strategies and methods – Meixner Method, Slingerland Method, Orton-Gillingham Method etc.	- Special education
- They both need the school and professional orientation certificate issued by Centre for Resources and Educational Assistance of each Romanian County	
- Same professionals are involved: speech therapist, support teacher, school counsellor (psychologist)	

The definition of Dyslexia used in Romania by the school system:

"Specific Learning Disabilities" (SLD) - designates a heterogeneous group of disorders affecting the typical learning process (reading, writing and mathematics):

Dyslexia, Dysgraphia and Dyscalculia. This is not a consequence of a lack of learning opportunities or a lack of motivation for learning, it is not the result of an intellectual disability, a liminal intellect, sensory deficit (eg auditory, visual, motor), affective and

emotional disorders of a psychiatric nature, or other (neuro) developmental disorders (e.g., TSA - autistic spectrum disorders, ADHD - Attention Deficit Disorder and Hyperactivity Disorder) and is not caused by any form of cerebral trauma or maladia of acquisition. Dyslexia, dysgraphia and dyscalculia may appear isolated or may be associated. These are a biological disorder, not a consequence of the absence of learning opportunities, the existence of inadequate conditions or unfavourable learning conditions (according to Order of the Minister of National Education of Romania No. 3124 published in 20th of January 2017)

- Dyslexia is a specific disorder of reading skills (in terms of correctness, fluency, comprehension) that are not developed to the expected level by reference to the level of intellectual development, the level of schooling and the age of the person.
- Dysgraphia encompasses all forms of disruption of the typical acquisition process of written expression (letter errors, syntactic errors and punctuation errors, graphical organization of paragraphs).
- Dyscalculia is a specific learning disorder that is expressed by disturbances of the typical acquisition process of mathematical abilities (numerical sense, memory of the assembly and multiplication table, correct or fluent calculus, mathematical reasoning).

Dyslexia, Dysgraphia and Dyscalculia are persistent, not transitory. Persistency is defined as the limitation of learning process (there is the lack of evidence that the student keeps up with his classmates), for at least 6 months, in spite of an extra help at home or at school (according to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5 elaborated by the American Psychiatric Association published in Romania in 2016 by Calisto Medical Publishing).

Professional/parents associations related to Dyslexia in Romania

- **The Romanian Association for Children with Dyslexia** (Asociatia Romana pentru Copii Dislexici located in Targu Mures, Mures County) was established in 2002 by a group of parents and professionals (psychologists, speech therapists, teachers and primary teachers). Its objectives are as follows:
 - disseminating information and raising awareness about learning disabilities and related topics;
 - disseminating information on the appropriate therapies;
 -
 - implementing innovative therapies;



- offering support to dyslexic children and their families;
- trainings for teachers;
- ensuring equal chances to dyslexic children to help their integration both in school and society.

Main activities implemented by this association are:

- implementing projects for raising awareness and sensitivity
- writing books (textbooks, course materials)
- trainings
- supervision
- counseling and information for parents
- participation and presentation at international and national conferences
- exchanges of experiences, workshops

For more information, activities, articles, books published, you can access <http://www.copiidislexici.ro/ro>).

- **Arad Association for Children with Dyslexia** (Asociatia Arad pentru Copii Dislexici, located in Arad, Arad County) (<http://descoperadislexia.org/>)

This association defines itself as „a group of parents engage with their children, getting involved in supporting children, youth and adults with difficulties in dyslexia, dysgraphia and dyscalculia and their families. This association was born from the need to support the young these intelligent, sensitive, creative and unexpected gifts but misunderstood and not supported by those around them.

The main purpose is to benefit from the same advantages as a child or young person used to have a normal life, or unrestricted label "benevolent friends". Not all have the same qualities, but some gifts are very rare and hidden. The proof is Peter, a child who despite difficulties to read and write, learn with the help of wonderful people to be able to handle future colorful life (you can read his story here).

They share their experience, their knowledge through meetings organized by them. Through their involvement they value the next generation, they build life, they grow with each child and family assisted with every step you pass those looking for them.



Every year, October is dedicated to dyslexia awareness. Specialists and parents across the country talk about specific learning disabilities and their impact on them and their families. Associations dedicated to dyslexia organize events for all those interested (parents, teachers, specialists, family doctors etc.) to find together the best solutions to help children with specific learning disabilities (TSLs) reach their full potential.

- **Bucharest Association for Children with Dyslexia** (Asociația București pentru Copii Dislexici located in Bucharest) <http://www.dislexie.org.ro/>
- **Oradea Association for Children with Dyslexia** (Asociația Oradea pentru Copii Dislexici located in Oradea, Bihor County) <http://dislexietecunosc.blogspot.ro/>
- **Sf. Gheorghe PRO-DIS-LEX Association** (Asociația PRO-DIS-LEX din Sf. Gheorghe) <https://www.facebook.com/profile.php?id=100004787085440&fref=ts>

Related associations to the theme:

- **Association of Hungarian Medical Educators in Romania** (Asociația Psihopedagogilor Maghiari din România, located in Cluj Napoca, Cluj County)

<http://www.gyogypedagogia.ro/>

- **Talentum Foundation**, Targu Mureș, www.talentum.ro

3. Knowledge about dyslexia and training needs

In general, in Romania teaching staff are less familiar with dyslexic disorders. Why? As we mentioned before (1.1.), they didn't have the opportunity, during college or university studies, to interact with dyslexia students....probably, in the happiest situations, they got knowledge of basic language concepts and dyslexia. Further on, professional training during teaching career wasn't focused on specific learning disabilities, due to the lack of trainers at the national level (as it was explained before, there are now few experts at the national level concerning intervention in dyslexia and teachers' training on this matter).

Mostly, primary teachers are struggling with readers, particularly students with dyslexia, as they are the first ones dealing with children at the onset of schooling. Often, they confuse specific learning disabilities with learning difficulties and mental retardation.

Finding from studies (Dislexia – Ghidul profesorului si al parintilor, prof. logoped Chirilă Mihaela, prof. logoped Alina Mendelovici, prof. logoped Milici Roxana-Cristina. - Iași: Editura Spiru Haret, 2016, ISBN 978-973-579-264-0/ Dyslexia – teachers and parents guide) indicated misperceptions about dyslexia in conjunction with facts:

	Misperceptions	Reality in E.U. and other countries	Reality in Romania
1.	Dyslexia Is a very Rare disability.	<p>According to a research conducted by ED (European Dyslexia Association), the segment of Europeans who present dyslexia is about 5-12% of the population. In the U.S., the NIH (The National Institutes of Health), showed that dyslexia affects 5-10% of the population with an estimated increase of 17%. Some people may have middle forms while others may experience it in a more severe form.</p> <p>Unfortunately, only one in 10 dyslexics, says the specialists in this Institute, benefit from a personalized intervention program and receive special education services to help with learning reading.</p>	<p>According to the national study carried out in 2012, on average, in a year, specialists deal with 650 children in schools and 75 children in private practice. Also, one in 6 dyslexic children attending specialised therapy, in one year, are new cases of dyslexya. Moreover, according to the research, about 4 out of 10 children surveyed by a specialist are dyslexic, and 40% of them are aged between 5 and 8 years and 60% between 9 and 11 years. At the same time, The interviewed primary teachers reported they had on</p>



			average 3 dyslexic children compared to an average of 22 children in a class.
2.	Dyslexia is a problem belonging to a certain developmental stage; it disappears with growth.	Dyslexia is a life-long problem. Dyslexic monitoring shows that disability still persists. However, many dyslexics learn to read correctly, but they continue to read slowly, without automating the act	The results of the study mentioned before reveal a reported incidence among Romania's population of 25 cases of dyslexia in 10.000 households, while only 15.5% of Romanians have heard dyslexia.
3.	Intelligent people Cannot be dyslexic and cannot have a learning disability	There is absolutely no connection between dyslexia and intelligence, dyslexics can have a high, medium or low intelligence rate just like the rest of population without dyslexia. Thomas Edison, Leonardo Da Vinci, Pablo Picasso, Alexander Graham Bell, Albert Einstein, George Washington, Thomas Jefferson, Winston Churchill are just some of the geniuses who have suffered from dyslexia and which the learning disability did not prevent them from remaining in history. Among the very rich dyslexics we may include Ted Turner, the founder of CNN, Richard Branson, the founder of the Virgin Group, or Henry Ford, who set up the car with the same name. Dyslexia also suffered by writers like Hans Christian Andersen, Agatha Christie and Gustave Flaubert. Actors familiar with the same disorder are Tom Cruise, Whoopi Goldberg, Keanu Reeves, or Robin Williams.	In our country, we didn't find certain data regarding High functional people identified with specific learning disabilities.



4.	People with dyslexia cannot read.	Most children with dyslexia can even read at a beginner level. Literacy is one of the classic alert signals that parents and teachers should be concerned about. It is important to test a child from pre-school to identify any problem and try to prevent major difficulties even before you begin the process of acquiring reading, intervening in the area of psychomotricity, phonological processing skills, etc. People with dyslexia can become quite good readers if they get the right intervention.
5.	Any child who reverses letters or words has dyslexia.	The inversion of letters and words is common in the early phases of acquiring writing and reading in both dyslexic and non-suspects. However, if this phenomenon does not stop after two years of reading- writing learning, there is an alarm signal for dyslexia. Because many people erroneously believe that letter inversion defines dyslexia, children who do not inverse letters are overlooked and are not sent to a specialist for diagnose.
6.	Children with dyslexia are lazy, they should try more. Those who practice reading long enough will not have dyslexia.	<p>Lack of knowledge about this dyslexia among educators and parents determines that these children are labelled as lazy or not striving enough.</p> <p>Research has shown using functional magnetic resonance imaging technology (MRI) that people with dyslexia use a different part of the brain when reading, displaying an abnormal pattern of functioning. If dyslexic students do not receive the right type of intervention, they often face great difficulties in school, despite the fact that that they are smart, motivated, and spend hours doing homework.</p> <div data-bbox="552 1608 1082 1957"></div>



7.	Dyslexia affects boys more than girls.	Boys' reading disabilities are indeed more often identified as girls, but studies indicate that such identities are biased. The current prevalence of the disorder is almost identical in the two genders. So why are there more boys being tested than girls? It's because of their behaviour. It can be noticed that if boys in the first, second and third grades cannot do their class tasks or homework, they become frustrated and behave in this way. This behaviour is obvious to parents and teachers, being an alarm signal, requiring a further investigation of the child. On the other hand, when the girls in the first classes do not do their homework, they tend to be quiet and try to remain invisible. Thus, they are not observed so early. Often, their dyslexia is discovered only later.
8.	Dyslexia can be healed or helped with medicines, fish oil, coloured lenses, visual exercises, homeopathic remedies.	None of these remedies has an effective basis for scientific evidence. Dyslexia needs specialized, explicit and systematic intervention. Speech therapy is the essential step. In our national educational system, we operate with 3 forms of SLD: light, moderate and severe form. The light form involves pedagogical flexibility, minimal adaptations of evaluation tools and methods. The moderate SLD refers to adaptations that are consistent with the curricular adaptations required by the pupil's educational needs and which are specific to the disrupted / disturbed school abilities of the student. The severe type of SLD requires of wide-ranging of educational adaptations as a result of a complex decisionmaking process. It is needed the multidisciplinary team decision (primary / class teacher, educator, support teacher, speech therapist, psychologist, parents etc.) to carry out case management.

So, as results of a short investigation on specific training needs for school teachers (educators, primary teachers, gymnasium teachers and high school teachers) undertaken in May 2017 in our county, we can mention several points of interest:

- 1) basic language concepts about specific learning disabilities;
- 2) national / European legislation knowledge regarding the necessary insuring support for students with specific learning disabilities;
- 3) theoretical knowledge on the difference between specific learning disabilities and learning difficulties in order to address correctly the students (their parents) to specialists;
- 4) once the students are identified with dyslexia, there is the need for specific classroom intervention strategies and methods: compensatory measures, dispensable measures, adapted assessment.

	Specialised training sessions in	Equipment	Coordination, monitoring and professional support
Psychologists / school	<ul style="list-style-type: none"> - assess the neuro-cognitive functioning profile of the student (verbal, nonverbal IQ, general IQ), - identify behavioural, emotional and motivational-affective profile, as well as adaptive functioning skills, - establish differential diagnosis (through specific assessment of attention, memory, sensory-motor and visual-space functions, language, phonological processing skills and other cognitive functions involved in the learning process), - forming and developing parents support groups and workshops (accept the diagnose of a dyslexic child, provide information about the SLD, meet other parents dealing with same problem, share experience, exchange ideas, create electronic groups and join nongovernmental associations etc.), 	<ul style="list-style-type: none"> - standard psychological tests; - making available, at the national level, an agreed psychological kit test recommended for identifying SLD; - agreement on recommended testing tool kit on behalf of The Minister of National Education and The College of the Romanian Psychologists; - equipping school counsellors with psychological tool kits as a result of the educational national strategy regarding the support of SLD students; 	<p>Developing professional groups (Facebook groups, eforums, blogs, websites) to exchange ideas, to debate on case studies, to disseminate research and studies, to ask for help, to collaborate for specific interventions;</p> <ul style="list-style-type: none"> - attending conferences (face-toface meetings and webinars) on SPD topics, workshops;
Speech therapists	<ul style="list-style-type: none"> - evaluation of oral language through a component approach (phonological, lexical-semantic, morpho-syntactic and pragmatic), - evaluation of written language: <ol style="list-style-type: none"> a. reading (the correctness expressed by number and type of errors, fluency in reading and understanding of the text), b. writing (writing, punctuation, types of errors in writing and their frequency), c. numeration and computation (reading and writing of numbers, correspondence between number and quantity, numerical sense, correctness and fluency in computational operations, using and understanding mathematical language, mathematical reasoning), - teaching parents different strategies and techniques to support their children in acquisition of reading, writing and numeracy, in doing homework 	<ul style="list-style-type: none"> standard tool kit for assessment the written and oral language, numeration and maths calculations; - making available, at the national level, an agreed assessment tool kit for the use of speech therapists; - agreement on recommended testing tool kit on behalf of The Minister of National Education and The College of the Romanian Psychologists2; - equipping speech therapists working in kindergartens and schools, with assessment tool kits as a result of the educational national strategy regarding the support of SLD students; 	<ul style="list-style-type: none"> - participating in national research; - meet and establish contacts between specialists and teachers, parents as part of multidisciplinary intervention team



Physicians	- medical evaluation for the differential diagnosis: psychiatric and neurological assessment, ophthalmic evaluation, otorhinolaryngology assessment etc.		
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TURKEY:

CURRENT STATUS OF DYSLEXIA IN TURKEY

Dyslexia is a type of learning difficulty characterized by inability to achieve normal reading, writing, calculation skills and social affairs comparing to their peers, and occurs in people who have normal or higher intelligence level. Dyslexia is not a disorder or disease. In Turkey most of the authorities including Ministry of Education mainly use the term “Specific Learning Difficulties” rather than “dyslexia”. It is a perception difference. It was described first in 1896 by W. P. Morgan as a “congenital word blindness”. Dyslexia is described as a condition “manifested by difficulty in learning to read despite conventional instructions, adequate intelligence and socio-cultural opportunity” by World Health Organization (WHO) in 1993. American Psychiatry Association (APA) described it as “specific learning difficulty” which is “the child’s affected academic skills (test scores or grades) are significantly below what would be expected for his/her age, thinking and reasoning ability” in 2013.

Specific learning difficulty has some subtypes including reading difficulty (dyslexia), writing difficulty (dysgraphia) and calculation difficulty (dyscalculia). These subtypes may appear solely or combined with others. Also, an estimated 25% of people with dyslexia show signs of attention deficit hyperactivity disorder (ADHD). ADHD is seen more frequently in combined subtypes. Additionally, emotional and behavioral problems like low sense of self, problems in peer relations, anxiety, depression and similar conditions may accompany the situation. The children with special learning disabilities do not have same characteristics. A detailed psychoeducational examination of the child is mandatory to diagnose the presence of the situation.

Dyslexia affects school success and causes unexpected academic underachievement. For that reason, dyslexia is generally diagnosed during school age. But it is possible to detect this situation in younger ages which provides early interventions. The sooner a child is diagnosed and receive support, the more likely the student will achieve long-term improvements. For that reason, improved public knowledge about dyslexia is the first step of early identification of the situation.

The frequency of dyslexia in Turkey is estimated between 5% and 7%. Its world average is higher than this number. It can be said that at least 2-3 students will have dyslexia in a classroom with 30 students. There are about 17,5 million students in the education system of Turkey. In according to 2 this numbers, it should be expected that 850.000-1.200.000 students have dyslexia in our schools. but the exact number of students who are covered by national guidance system is unclear. In Turkey, dyslexia is categorized as disability but it is not mentioned in general disability legislation and there are no available data in national statistics (TUIK, 2010, Survey on Problems and Expectations of Disabled People) Therefore it is very much difficult to obtain information about the

prevalence or demographic characteristics of dyslexia and dyslexic individuals. It seems that there are not any dyslexic people having problems outside or other than school environment. Because dyslexia is not recognized under the disability act, dyslexic individuals can not benefit from incentives that the other disability groups can regularly have as their social rights.

Contrary to the general legislation, if dyslexic students would like to have support education funded by Ministry of National Education, they should have diagnosed as disabled and receive a committee report that mention their disability rate is %20 or above. Most of the parents refuse to accept the label of disabled and give up the opportunity to have support education for their children. Refraining from stigmatization is more frequent in adolescents and young adults than primary school children. Turkish education system describes dyslexia as “specific learning difficulty”. This description is more comprehensive because dyslexia itself includes only reading difficulty. Doing so, the system covers not only reading difficulty but also writing and calculation difficulties. But the “dyslexia” term is well known name of this situation. For that reason, we will use “dyslexia” throughout the rest of the text instead of “specific learning difficulty”.

In Turkey official diagnosis of dyslexia or specific learning difficulties can only be realized by child and adolescents psychiatrists. The other professionals; guidance and research centers, private consultancy centers, school counselors, psychologists, special education experts can only work with students, refer them to related authorities, prepare their individualized educational plans etc. but cannot put the label on any students. After official diagnose either by a child and adolescent psychiatrist or a health committee, pre-school, primary, secondary and high school students can be included or mainstreamed in their own classroom with the official procedures run by guidance and research centers in cooperation with school management and parent. This is the first step for dyslexic students to obtain their other rights such as individualized educational plans, extra time, if necessary a reader for central examinations etc.

After a comprehensive assessment of all development areas and evaluation of the academic skills, educational identification is realized and objectives of one year plan is prepared. All the data concerning identification, inclusion and support education plans for each individuals uploaded to the system for future references and monitoring the expected improvements. This 750 class hour support program can be given twice for each student if necessary provided that the required procedures completed on yearly basis. Turkish laws order some measures and supports for those children. These includes the rights for standing front of the classroom, additional time for examinations, examination in a separate classroom, a special education program, interview with the guide teacher when the student asks, and separate assessment of examination papers. Also, parents of the students with dyslexia have some rights including diagnose and management of their children, free assessment by governmental organizations, and joining the decision process conducted by guidance centers, councils and schools.

The priority is to detect the presence of dyslexia. Guidance Research Centers (RAM), the branches of a governmental organization located in every city of Turkey, collaborate with the National Education Ministry, school managers and guide teachers, and regularly scan school children to achieve that. The other way to identify those children is conducted by guide teachers who located in the schools and observe students' successes. If they observe that the child has an underachievement, they send the child to RAM. But guide teachers can detect the students with dyslexia after their school success seriously affected. In this point, class teachers have an important and unique position to recognize the problem early. Unfortunately, these measures are insufficient. Because the class teachers who closely see those children everyday are mostly unaware of the presence of such a condition and the meaning of it.

The process identifying and supporting children with dyslexia conducted by education system in Turkey begins with the initial examination of the children by RAM. Children are enrolled for examination after either routine screening of RAM or the request by guide teachers. They perform some psychoeducational tests (WISC-R, etc.) that analyzes the intelligence level of the student and academic performance. Following this initial assessment, the student is sent to a pediatric psychiatrist by RAM to evolve the psychological status and family conditions of the student. If the student is diagnosed as having specific learning difficulty, a disability report arranged by an accredited hospital is requested by RAM. The report should emphasize that the student has at least 20% disability rate according to the disability grading regulation of the national social security system. When the reports including WISC-R, the psychological evaluation report and the disability report arrived to RAM, they do a meeting with local education council that arranges specific supports for the student. The council orders that measures to the school with the consent of the family.

These measures may include either specific supports in his/her school or an additional education support by a special rehabilitation center. If specific supports provided by the school are decided as a sufficient measure, they sent the decisions taken by the local education council to a commission (BEP) located in the school that consists of the guide teacher, the class teacher, the school manager and the parent. BEP decides the type of measures that will be performed in the school, and the special education program. These measures consist of physical supports, supports in examinations and social supports.

Physical supports include:

- Sitting in front of the classroom,
- Interviews with the guide teacher during either lessons or breaks when the student demands,
- Special courses (no more 12 hours in a week) on the lessons that the student's success is low.

Supports in examinations include:

- Additional 15 minutes in examinations,
- Examination alone in the classroom,
- Reader and/or writer support,
- Verbal examinations instead of writing examinations.

Social supports include:

- Orientation,
- Measures for positive communication with his/her friends,
- Measures for gaining self-confidence and reading/writing skills,
- Encouraging to join work groups,
- Encouraging to join class activities and responsibilities that the student can be overcome.

Special rehabilitation centers provide more advanced measures parallel to the school in children with more severe form of dyslexia. These measures include special education tools and equipment, additional courses for reading, writing and calculation skills, and psychological support for the student and his/her family.

In conclusions, dyslexia is an important learning difficulty that involve more people than we thought. Detection and appropriate management of the situation makes those children more successful in their future life. Appropriate measures for management of this situation is required early diagnosis and collaboration of the school, family and guidance system. But it should be mentioned that the most important part of the process is the class teachers who are see those children everyday and closely assess their reading, writing and calculation skills. Therefore, the education of class teachers is very important to overcome this problem.

GENERAL CONCLUSIONS of the performed National Desk Research surveys:

1. In all the studied countries there is a growing market for trainers working with persons with dyslexia but that there is no recognized formal training and no clear professional profile.
2. In most of the partner countries (BG, TR, GR) there are no specific teacher training programs or teacher certification programs regarding teaching students with dyslexia.
3. In some of the countries professionals who lack an understanding of dyslexia tend to associate dyslexia with genetic, neurological and dietary issues in ways

that meant they viewed dyslexia as being in the domain of health professionals or resource/support specialists who would 'correct' the child's deficits. They assume that children required medical and/or specialist intervention rather than educational support.

4. There is a need for National / European legislation knowledge regarding the necessary insuring support for students with specific learning disabilities;
5. Theoretical knowledge on the difference between specific learning disabilities and learning difficulties is needed in order to address correctly the students (their parents) to specialists;
6. Once the students are identified with dyslexia, there is the need for specific classroom intervention strategies and methods: compensatory measures, dispensable measures, adapted assessment.
7. Aspects of dyslexia are included in some trainings without specificity. Regarding specific training still a "wait-and-see" strategy is followed.(PT).
8. First and foremost it seems a question of teaching the teachers and time-capacities in their daily work. The readiness and eagerness to learn are there.
9. Big majority of the teachers trainers and parents do seem interested in dyslexia concerns, but are often only rudimentarily informed. The majority of the educators, of the sample, expressed the need to attend seminars focusing on school class managing problems.
10. The approaches to dyslexia would only be successful if they:
 - were built on home/school/early years setting cooperation, collaboration and in-depth discussions between professionals, parents/carers and children.
 - clearly identified the roles of staff in relation to different levels of intervention, focus support on the mainstream setting and enable mainstream professionals to become more proactive.
 - fostered peer group understanding of dyslexia, placed children at the centre of decision-making and recognised the strengths/abilities of younger children
 - enabled a balance of generic and specific support, avoided labelling children to early and utilised creative/holistic pre-literacy approaches in early years setting,

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**UNDERSTAND
AND TEACH**
HELPING STUDENTS WITH
LEARNING DISABILITIES - DYSLEXIA



Erasmus+