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CORTTEX

COGNITIVE RESOURCES FOR TODDLERS TEENS AND EXPERTS

NEED ANALYSIS OF SPECIALISTS WORKING WITH STUDENTS WITH LEARNING DIFFICULTIES

CORTTEX REPORT FOR ROMANIA, BELGIUM, AND GREECE

UNIVERSITY OF BUCHAREST
VIRTUTE ET SAPIENTIA

HELLENIC REPUBLIC
UNIVERSITY OF MACEDONIA

inte*learn
Multimedia Educational Software

EAMHID
EUROPEAN ASSOCIATION FOR MENTAL HEALTH IN INTELLECTUAL DISABILITY

CASA CORPULUI DIDACTIC a Municipiului Bucureşti

Contents

1. Introduction

Legislation and good practices regarding learning difficulties are different from one country to another, and the differences are noticeable starting with the way they are defined. From an educational perspective, learning difficulties are a disability. Instead, in the clinical approach, learning difficulties are considered a disorder (learning disorders being the concept that corresponds to the medical model). In many countries, people with learning disabilities are considered people with disabilities, giving them access to many benefits from the state. Although in many papers, studies, official documents the distinction between learning difficulties and learning disorders is not clearly explained, the difference between the two concepts is based on the substantive condition that determines the performance deficit in both cases: the disorder is generated by a development atypical of some brain functions, while the learning difficulty involves a typical development of brain functions, being generated by the presence of other disorders, inadequate teaching methods, etc. (Dyslexia - AUSPELD, 2014; Gavril, 2019).

Persons identified as having learning disabilities or learning difficulties all show different intellectual and emotional profiles, strengths and weaknesses, learning styles and life experiences. They have distinctive patterns of difficulties, relating to the processing of information, within a continuum from very mild to severe, which may result in restrictions in literacy, language, number, motor function, short term memory, and organization skills. The most common diagnoses associated with learning difficulties are the neurodevelopmental disorders: dyslexia, dyspraxia, dyscalculia, intellectual disability, ADHD (attention deficit/hyperactivity disorder, ASD (autism spectrum disorders), specific language impairment.

Dyslexia is the most common learning disorder. Dyslexia is the term used to describe a disorder that is mostly characterized by severe learning difficulties in reading, spelling and writing skills. According to research in Europe, 9 to 12% of the population is dealing with dyslexia or some sort of learning disorder. Large numbers of people within that 15% are simultaneously suffering from other disorders as well. According to the European Dyslexia Association: 20% - 40% of the persons with dyslexia are also having dyscalculia; 20% - 55 % of persons with developmental language disorder are dyslexic; 10% - 20% of persons with dyslexia are having an anxiety disorder; 2% - 14% of persons with dyslexia are having depression; 8% -

18% of persons with dyslexia are having an attention deficit and/or hyperactivity disorder (European Dyslexia Association).

Learning difficulties are a challenge for both students and teachers and other specialists who come into contact with students. These difficulties have negative snowball effects if they are not identified early and managed properly. Students with learning difficulties meet both in mainstream education and in special education, which is why we consider it a subject worthy of investigation.

First, in this report, we will present the current state of affairs regarding the situation of students with learning disabilities in Romania, Belgium, and Greece. Second, we will analyze the needs of specialists working with students with learning difficulties in these three countries. Following this needs analysis, we aim to develop a platform of courses and educational resources useful to specialists in their work with these students.

Children with learning difficulties in Romania

In Romania, the first mentions about children with special educational needs (SEN) appeared in the National Education Law, the provisions referring to inclusive education and to the ways of including children with disabilities in mainstream education. Law 6/2016 is the first law that specifically refers to children with specific learning disabilities. The law contains support measures, in order to better adapt to school requirements and prevent school failure or dropout.

Through the methodological norms, the law aims at:

• guaranteeing the right to education of all students identified with learning disabilities;

• favoring the students' school success through didactic support measures, guaranteeing an adequate training and promoting the development of the potential of each student;

• reduction of relational and emotional difficulties, secondary to learning disorders;

• adopting forms of verification and evaluation adequate to the formative need of the students;

• training of teachers, support teachers, psychology teachers, speech therapists, school counselors, as well as the responsibility and awareness of parents in dealing with problems related to learning disorders;

• favoring the early diagnosis of students and establishing rehabilitative teaching paths;

• increasing communication and collaboration between family, school, county resource centers and educational assistance / Bucharest Center for Educational Resources and Assistance (CJRAE / CMBRAE) and family doctors, during training and formation;

• ensuring equal opportunities for the development of all students' abilities, necessary in the social and professional environment. (Order no. 3142 on the approval of the Methodology for providing the necessary support to students with learning disabilities, published in the Official Monitor of Romania, Part I, no. 117 of February 10, 2017)

Unlike the laws from other countries (for example, Great Britain, USA and Canada) which provide support measures for people with learning difficulties both during school and at university and professional level, the Romanian law applies only to students from pre-university education.

For the early identification of the risk of developing a learning disorder, the law provides:

• a compulsory psycho-pedagogical evaluation in the first two years of school;

• a complex evaluation performed by specialists (psychologists/ teachers, school counselors, speech therapists, doctors, etc.) in order to establish the diagnosis.

During primary school, children should be monitored through annual assessments by teachers. In this regard, the law recommends the use of classroom observation to identify those children who show signs of atypical development. As support measures within the school activity, the law encourages curricular adaptation and curricular augmentation.

The law also provides for differentiated assessments for students with learning disorders:

• tests and verifications are announced at least 24 hours in advance;

• additional time is provided (30-60 minutes) for the execution of the tests or checks with fewer requirements are provided;

• computerized tests are introduced;

• ensures that the teacher reads aloud the tasks to be performed during the checks. The topics are read one by one, in the order in which the paper is elaborated;

• the use of compensatory instruments is ensured in both written and oral tests;

• oral checks will be provided as alternatives to the written ones (especially in foreign languages);

• in the grading at the oral tests will be taken into account the lexical and expressive abilities of the student;

• depending on the situation, the assessments will be designed in such a way as to limit writing (for example, exercises with space to fill in, tick exercises, unit, etc.);

• the grading / evaluation of the written tests will take into account the content, not the form;

• the use of the pocket / office computer or tables with formulas is ensured.

(Order no. 3144 on the approval of the Methodology for providing the necessary support to students with learning disabilities, published in the Official Monitor of Romania, Part I, no. 117 of February 10, 2017).

The law provides for teacher training courses in continuing education programs, in order to acquire skills for early identification of learning difficulties and the application of appropriate teaching strategies.

In the interest of children, the law provides for the organization at the level of resource councils and educational assistance of parental counseling departments for parents with children with learning disabilities, to ensure communication between school-family-specialists, essential collaboration for diagnosis and intervention during the schooling of students.

Children with learning difficulties in Belgium

Belgium's approach to education for students with learning disabilities (special needs education) is based on the principle of inclusion and equality. There is a strong commitment in giving every child the right to an education which maximises their potential. Belgium however is a quite peculiar federal country, and the responsibility for implementing educational policies belongs to language communities and their respective Ministries of Education: (1) the Flemish Speaking Community (around 58%of students); (2) the French Speaking Community (around 37%of students); (3) the German Speaking Community (around 5% of students).

In Flanders, the Parliament Act of 28th June 2002 on equal opportunities in education, granted all students who, based on a statement of special educational needs are oriented towards a type of special education, the right to enrol in a school or school site of their choice. This Act was followed by other integrations in 2008 and 2011 that provided a framework for the equal opportunities and equal treatment policy, and further promoted equal opportunities in Education.

The legislation for inclusive education was further strengthened in 2014 with an M-Decree, which reinforces the right of students with special educational needs (SEN) to be enrolled in mainstream education. Flanders made good steps towards inclusive education, but there is still more work that must be done to meet all of the requirements of the United Nation's Convention on the Rights of Persons with Disabilities (UN CRPD).

The French Community as well has made efforts to promote the rights of learners with disabilities to an inclusive education. Eight types of special education are foreseen, broken down according to the child's disability: learners with mild intellectual disabilities (Type 1, primary school only); learners with moderate or severe intellectual disabilities (Type 2); learners with severe behavioural and personality problems (Type 3); learners with physical impairments(Type 4); learners with an illness or who are convalescent (Type 5, classroom in clinic); learners with a visual impairment (Type 6); learners with an auditory impairment (Type 7); learners with an instrumental impairment (Type 8; primary school only). In 2009, a decree introduced provisions for the integration of students with special needs in mainstream education requiring a partnership between a special school, in which a pupil is officially enrolled, and a mainstream school into which the pupil is partly or totally integrated, with assistance from various parties. Within the French speaking community, education is organised not by age and cycles as in mainstream schools, but by four levels of maturity/competence. A child moves from one level to another when certain skills have been acquired and this may happen at any point in the academic year. In all cases children are taught by qualified teaching staff at all stages and have personalised study plans. Where required, teaching staff are supported by medical professionals, social workers and psychologists.

In *the German Community*, the provision of special education needs services is disconnected from the education system, and a separate institution has been put in charge of this. Therefore, in the German community schools are not in charge of the provision of special education needs services, yet still have to facilitate a learning environment to incorporate them (European Consortium for Autism Researchers in Education). Several decrees have been adopted thought the years specifying the support needs to be provided through a collaboration of multiple institutions with the aim to coordinate and complement the education provided, and the aim of education for children with special education needs, which is to enable them to live an

independent and social life. In 2016 was ratified the Decree on the Instalment of a Department of the German-Speaking Community for Self-Determined Life whose Article 6 states that the responsibilities towards the general public include creating awareness for special education needs and its current support provision, as well as to conduct research to improve these services moving forward (Decree establishing a service of the German-speaking Community for self-determination., 2016).

Children with learning difficulties in Greece

A national Greek survey in students sample showed 3% - 11% of students' population present learning difficulties. Recent study that almost 1 in 4 students presents learning difficulties, mostly boys. The state ensures and continually improves the compulsory nature of special education emphasizing on the fact that it constitutes an integral part of compulsory and free of charge public education, provided to disabled individuals of all ages and of all grades and levels of education. The educational policy on special education supports the inclusion of students with disabilities and special educational needs within mainstream schools by providing suitable supporting structures and services.

The special educational needs of students with disabilities and special needs are ascertained and diagnosed by the Educational and Counselling Centres (KESYs), the Interdisciplinary Educational, Evaluation and Support Committees (EDEAYs) and the validated by the Ministry of Education, Community Centers for the Mental Health of Children and Adolescents of other Ministries. KESYs (Educational and Counselling Centers) recommend the registration, placement and attendance of students in the appropriate learning environment, or whenever necessary the changing of learning environments and the proper psycho-paedagogical and educational support, as well as the appropriate equipment and educational material which will facilitate the process of teaching and communication with the student. As regards the time of re-evaluation, this is determined by KESYs according to the type and degree of the student's identified educational needs and learning difficulties. If the re-evaluation time is not specified, the reports of the committee are permanently valid.

Students may attend: (a) an *ordinary mainstream school classroom*, in case of students with mild learning difficulties, supported by the classroom teacher; (b) a *mainstream school classroom, with concurrent support-inclusive education* by special education teachers, when this

is imperative by the type and degree of the special educational needs; (c) *specially organized and suitably staffed integration classes*, operating in the general and vocational education schools; (d) *integration classes* – which create a fully inclusive school environment for students with special educational needs. This is achieved through the implementation of special education programs, teaching and learning content adjustments and the use of special equipment, including e-equipment, software, logistics and other solutions provided for by the Educational and Counselling Centres (KESYs) (Syriopoulou-Delli, 2020).

2. Methodology

In order to carry out this needs analysis, we used a mixed cross-sectional methodology (quantitative and qualitative), which would offer a comprehensive perspective on several aspects regarding the education and interaction with students with LD: attitude and knowledge about learning difficulties, concerns about teaching students with LD, integrated curriculum use, methods of teaching Mathematics, Reading, Writing, and Spelling, methods for identifying students with LD and assessing their cognitive skills, management of challenging behaviors, parent-teacher relationship, methods of enhancing empathy in children with LD, and education quality.

2.1.Participants

Participants from 3 countries were involved in this need analysis, as follows: 489 people (88% women) from Romania, 111 people (84.7% women) from Belgium and 93 people (93% women) from Greece. Respondents from Romania were between 20 and 72 years old, with a mean age M = 44 (SD = 8.69). Participants from Belgium were between 23 and 40 years old and had a mean age M = 30.5 (SD = 3.73). Participants from Greece were between 21 and 58 years olf and had a mean age M = 29.6 (SD = 9.52).

2.2.Instruments

We designed a need analysis questionnaire divided into five parts: (1) socio-demographic information; (2) teachers' attitude and knowledge about students with LD; (3) concerns about teaching students with LD; (4) integrated curriculum use; (5) teachers' practice with students with LD. The participants were also offered the option to report that they do not know about the investigated phenomena.

The first part of the questionnaire requested information about age, sex, country, years of working experience, education level, and current profession of the participants.

Part two investigated the teachers' attitude regarding students with LD using a 5-point Likert scale from 1 (*not true for me*) to 5 (*very true*) and their methods for teaching Mathematics, Reading, Writing, and Spelling, using open questions, with narrative responses. The respondents also had the possibility to check the option "*I don't know*", in case they are not familiarized with the phenomenon.

Part three assessed the concerns and needs teachers have when teaching children with LD, using the same 5-point Likert scale as described above. It consisted of 25 items adapted from the Stages of Concern Questionnaire (Bailey & Palsha, 1992). Some items referred to specific concerns participants have (e.g., *I am concerned about how learning difficulties affect students' attitudes at school.*). Other items investigated the needs of the participants (e.g., *I would like to know how to design materials for LD.*). An overall score was calculated by summing up the answers to the scale's items. Similarly, *part four* consisted of 29 adapted items from Integrated Curriculum Implementation Scale (ICIS; Rismiati, 2012) to explore the extent to which teachers use multiple methods in their teaching, that transgress the borders of one discipline. An integrated curriculum approach consists of learning something while making connections between various subject areas. The scale measures the following constructs: student-centered learning, direct experiences in learning, subject integration, whole learning, flexibility, variety of assessment, and engaged learning. A higher overall score indicated higher use of integrated curriculum strategies.

Part five of the questionnaire consisted in 11 questions: (1) 7 open ended questions about ways to identify students with LD, assessing cognitive skills, managing challenging behaviors, cultivating empathy, and cooperation with parents; (2) 3 Yes or No answer questions about the need for training in cognitive education, challenging behaviors, empathy, parent-teacher cooperation; (3) the estimated quality of education for children with LD in the classroom, on a 5 point Likert scale from 1 (*very low*) to 5 (*very good*).

2.3.Procedure

Between September and November 2020, we developed the questionnaire in English and conducted a pilot study on 16 participants from Romania and Greece, to ensure that specialists understand the questions and to make the necessary changes. At the end of December,

the final questionnaire was prepared in 3 languages (Romanian, English, Greek) in a Google Forms and was distributed in the network of education specialists from Romania, Belgium and Greece. Data collection lasted until May 2021. The participants completed the survey only once.

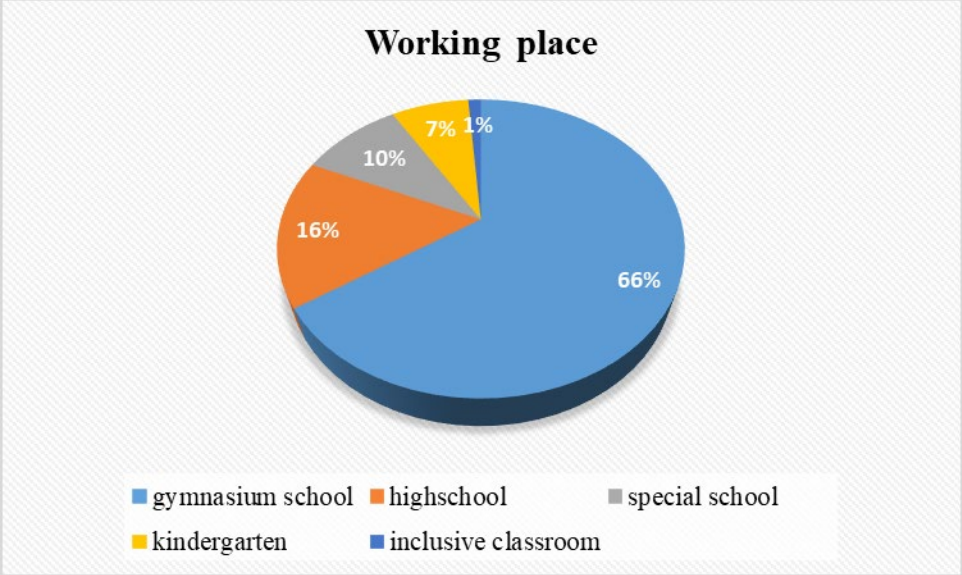
Before completing, the participants read and signed an informed consent form explaining the purpose of the project and the questionnaire. Participants were offered the opportunity to ask questions about the email questionnaire. They were also able to withdraw from completing the questionnaire at any time, without consequences. No rewards were offered for completion.

3. Needs analysis results

3.1.Socio-demographic information

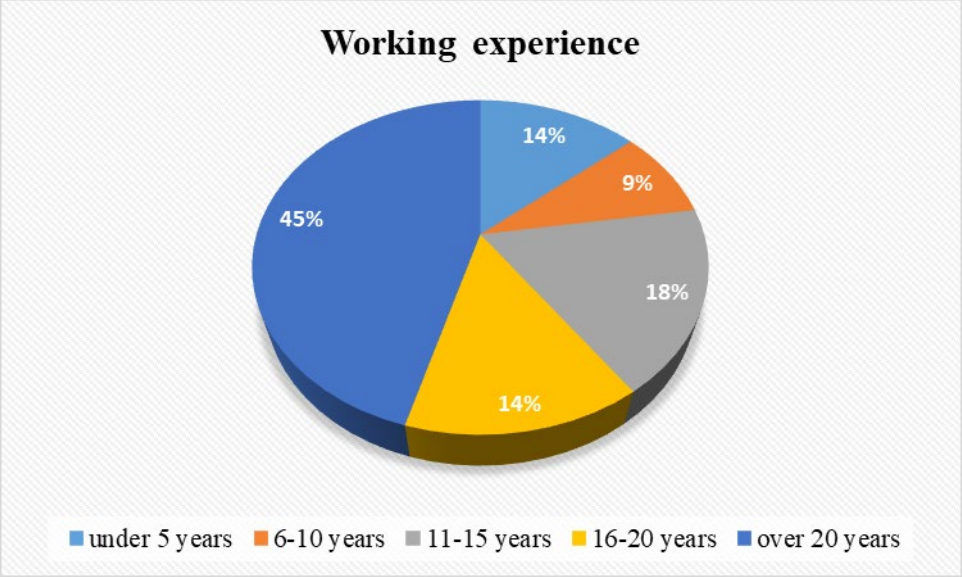
Romania

As one can see in the chart below, most Romanian participants work in gymnasium schools (66%), followed by high-school professionals (16%), special school staff (10%), kindergarten staff (7%), and inclusive classroom teachers (1%).



Regarding working experience, almost half of the Romanian participants have over 20 years of professional experience in the field of education, 18% have 11-15 years of professional experience, 14% have 16-20 years of experience, and 9% have 6 to 10 years. Only 14% have

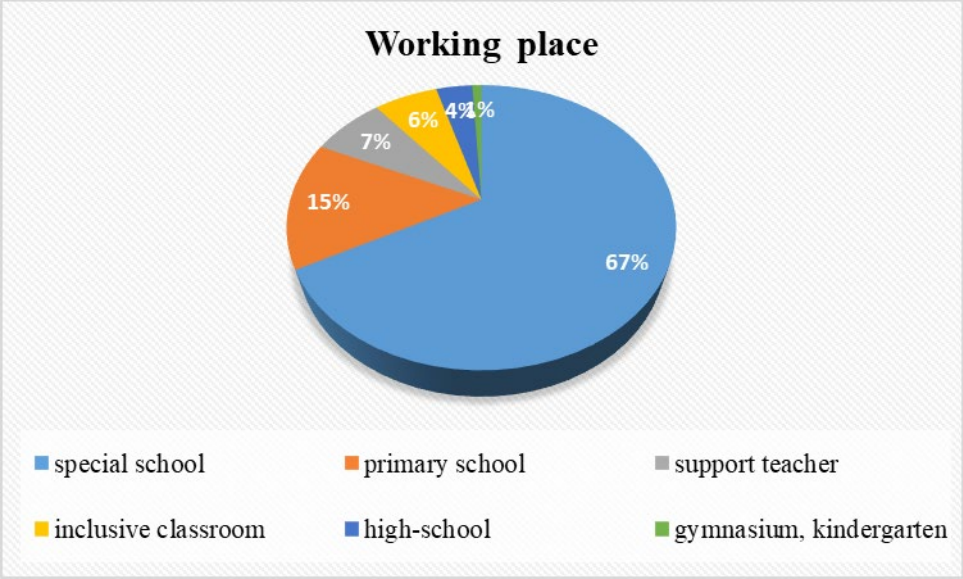
under 5 years of working experience, which demonstrates the interest of education specialists with significant experience for continuing learning.



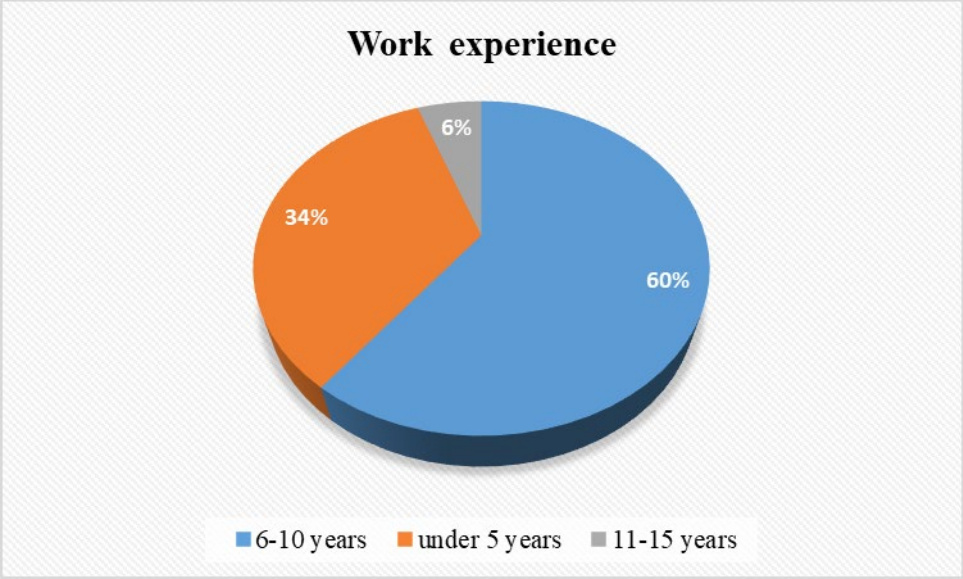
As for their education level, most participants have a bachelor (50%) or master's degree (43.8%). Only 4.3% have high-school level education.

Belgium

Contrary to Romanian participants, Belgium specialists who answered our survey work mostly in special schools (67%). 15% work in primary school, 7% work as a support teacher, and 6% in inclusive classrooms. More details can be found in the chart below.



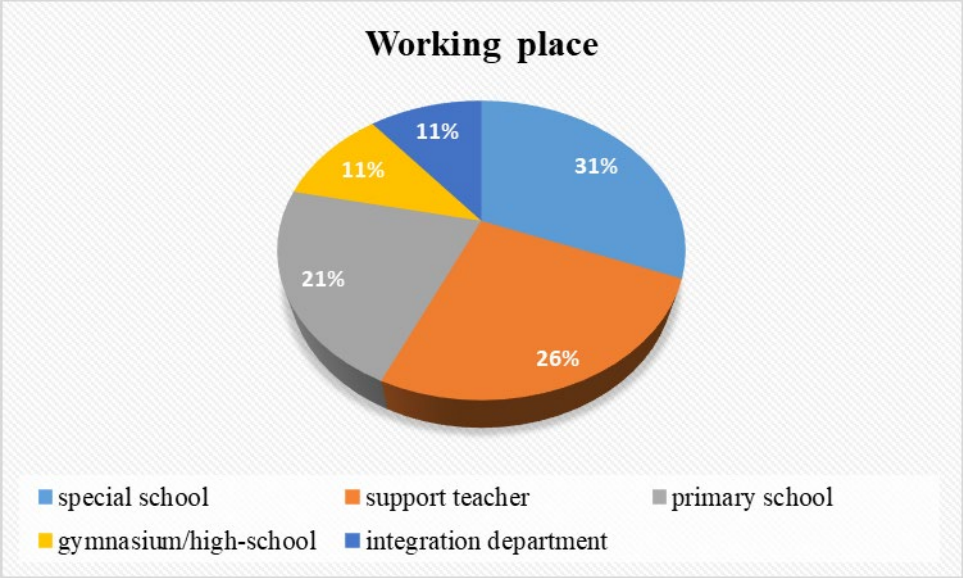
Most Belgium participants (60%) have 6 to 10 years of professional experience, while 34% have under 5 years of experience in the field of education.



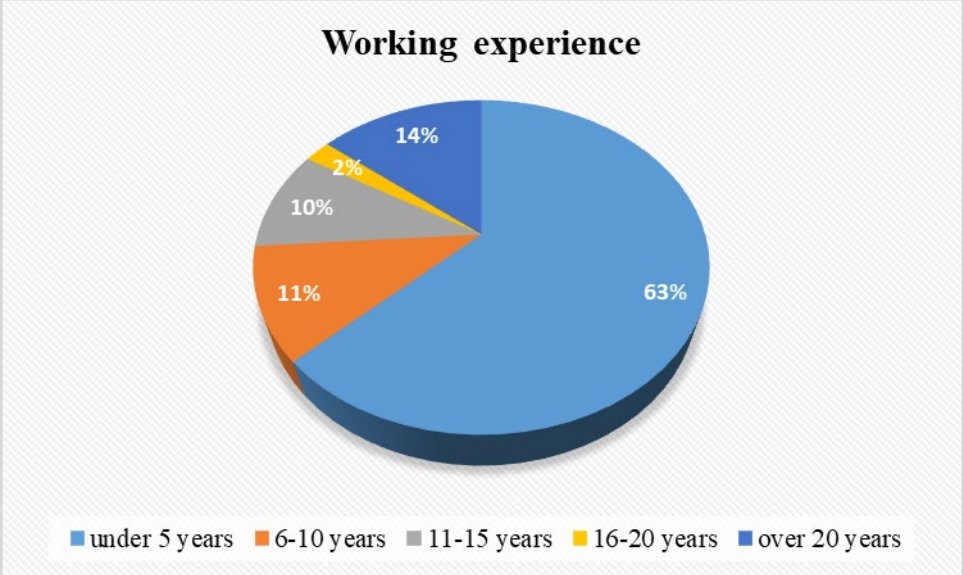
Regarding education, they have bachelor (45%) and master's degree (55%), similar to Romanian participants.

Greece

Greek participants work in special schools (31%), as support teachers (26%), in primary schools (21%), in the integration department for students with disabilities (11%), and in the general teaching system from gymnasium or high-school (11%).



In contrast to Romania and Belgium, most Greek specialists have under 5 years of working experience (63%). Only 14% have over 20 years of experience, while 11% have 6 to 10 years. More details can be consulted in the chart bellow.



Concerning education, 46.2% of Greek participants have vocational studies and 41.9% have a postgraduate degree. A minority has secondary education (4.3%) and PhD studies (2.2%).

3.2.Attitude and knowledge about students with LD

Romania

Most Romanian participants agree that the special scientific staff should be exclusively responsible for teaching students with LD and not the classroom teacher (61.3%), although the situation is mostly reversed in Romania, due to shortage of specialized teachers in mainstream schools. Also, the majority of respondents agree that students with LD are additional workload for the teacher (90%), and they use assistive technology to manage these students (63.8%). However, only 49% report they are familiarized with software dedicated to learning difficulties. Despite this, half of the participants believe that only modern technology can support the teaching of students with LD (53.7%), 38.9% believe this is not true of partially true, and the remaining 7.4% don't know what to say regarding this topic. The vast majority of respondents (91.4%) would like to know more about using modern technology for teaching students with LD.

The involvement of parents in the students' homework is necessary, as the participants report (88.6%). Roughly half of the participants respondents believe that students with LD cannot be taught all subjects (58.5%), an attitude which can be an obstacle in teaching them correspondingly. However, most specialists declare that their school is supportive of teachers who teach children with LD (74.7%).

ROMANIA (N = 489)	**1 (not true)**	**2 (partially true)**	**3 (moderately true)**	**4 (true)**	**5 (very true)**
10. The special scientific staff is exclusively responsible for teaching students with LD not the teacher of the classroom.	13.3	14.9	29.4	16.6	15.3
11. Students with LD can't be taught all subjects.	21.3	13.3	22.9	18.4	17.2
12. Teaching students with LD is additional workload for the teacher.	4.3	2	8.6	18.8	62.6
13. My school is supportive of teachers who teach children with LD.	10	7.4	18.6	17.2	38.9

14. I use assistive technology to manage students' LD.	16	9.8	25.2	22.9	15.7
15. I recognize that the involvement of parents in students' homework is necessary.	5.7	4.3	10.4	17.6	60.6
16. I am familiar with software related to learning difficulties.	20.2	17.2	24.7	15.1	9.2
17. Only modern technology can support the teaching of students with LD.	21.1	17.8	33.5	13.5	6.7
18. I would like to know more about using modern technology in teaching students with LD.	5.9	1	8.6	11.9	70.9

Belgium

From the 111 Belgium specialists who answered our survey, 45% declared that they don't work with students with LD. The completion of the survey is due to the interest these people have in the topic, despite not having professional experience with LD. Most Belgian specialists (78.4%) tend to consider that the teacher in the classroom is also responsible for students with LD, not just special scientific staff. In contrast to Romanian respondents, 32.4% of Belgian teachers consider that a student with LD is not an additional workload for the teacher, while 45% consider that this is partially true. Only a minority (22.5%) believes that students with LD represent additional workload. Perhaps the school's supportive policy for teachers who interact with students with LD has something to do with these answers, since 98.2% report working in such supportive settings. Approximately, 55% use assistive technology to manage students with LD and only 42.3% believe that only modern technology can support the learning process in these students. Nevertheless, all respondents want to know more about the use of technology to facilitate learning. 45% of them are partially familiarized with software dedicated to learning difficulties, so there is still room for improving the relationship with educational software.

Approximately 31% of Belgian specialists reported that students with LD cannot be taught all subjects, 13.5% said that this is partially true, and 38.7% believe that this is not true at all. As with Romanian respondents, the vast majority of Belgian participants (94.5%) recognize the necessity for parents to be involved in the students' homework.

BELGIUM (N = 111)	1 (not true)	2 (partially true)	3 (moderately true)	4 (true)	5 (very true)
10. The special scientific staff is exclusively responsible for teaching students with LD not the teacher of the classroom.	18.9	59.5	17.1	3.6	0
11. Students with LD can't be taught all subjects.	38.7	13.5	16.2	12.6	1.8
12. Teaching students with LD is additional workload for the teacher.	32.4	45	9.9	10.8	1.8
13. My school is supportive of teachers who teach children with LD.	0	0	14.4	18.9	64.9
14. I use assistive technology to manage students' LD.	0	0	7.2	5.4	42.3
15. I recognize that the involvement of parents in students' homework is necessary.		0.9	18	45	31.5
16. I am familiar with software related to learning difficulties.	0.9	45	3.6	33.3	17.1
17. Only modern technology can support the teaching of students with LD.	12.6	28.8	38.7	2.7	0.9
18. I would like to know more about using modern technology in teaching students with LD.	0	0	0.9	56.8	42.3

Greece

Similar to Belgian respondents, most Greek specialists in education (74.2%) believe that the teacher is also responsible for teaching students with LD, not exclusively the special scientific staff. Like respondents in Romania, most Greek teachers (80.7%) consider that a student with LD is an additional workload for the teacher, even though the school they work in is supportive of teachers interacting with LD students, as 86% of them report. It seems that this support is not enough to take the workload off the teachers. As in the other two countries, most Greek participants (86%) also use assistive technology in teaching these students, they are familiarized with software related to learning difficulties (76.4%), but they would like to know more about the use of modern technology in educating students with LD (96.7%). Similar to the

other two countries, in Greece it is also recognized the necessity that parents get involved in the students' homework (97.8%).

When faced with the claim that students with LD cannot be taught all subjects, 52.7% of Greek respondents said this is not true at all, showing a positive attitude, while 25.8% consider this is partially true. Only 25.8% believe this to be true. These results are in contrast to what Romanian teachers believe. This difference may be due also to the fact that most Greek specialists are younger and they incorporated the modern policies about disability faster, they have few years of experience and mostly teach in special schools or are support teachers – which means they are well familiarized with a variety of special needs students. Most Romanian respondents work in mainstream school, so they didn't get a lot of training in the area of learning difficulties. Also, they are older than their Greek fellows (M = 44 years old for Romania and M = 29.6 years old for Greece) and modern views of disability can be harder to integrate.

GREECE (N = 93)	**1 (not true)**	**2 (partially true)**	**3 (moderately true)**	**4 (true)**	**5 (very true)**
10. The special scientific staff is exclusively responsible for teaching students with LD not the teacher of the classroom.	43	31.2	14	11.8	0
11. Students with LD can't be taught all subjects.	52.7	25.8	8.6	9.7	3.2
12. Teaching students with LD is additional workload for the teacher.	7.5	11.8	26.9	43	10.8
13. My school is supportive of teachers who teach children with LD.	3.2	10.8	32.3	33.3	20.4
14. I use assistive technology to manage students' LD	3.2	10.8	24.7	41.9	19.4
15. I recognize that the involvement of parents in students' homework is necessary	0	2.2	11.8	35.5	50.5
16. I am familiar with software related to learning difficulties	10.8	12.9	40.9	24.7	10.8
17. Only modern technology can support the teaching of students with LD	15.1	32.3	37.6	14	1.1

18. I would like to know more about using modern technology in teaching students with LD	2.2	1.1	4.3	24.7	67.7

3.3.Concerns and needs regarding teaching children with LD

Comparative analysis of teaching concerns in students with LD showed that teachers in Greece have the highest average level of concerns (M = 91.9, SD = 11.7), followed by teachers in Romania (M = 85.9, SD = 17) and by those in Belgium (M = 73.5, SD = 14.3). According to the Welch's ANOVA test for unequal variances, these overall differences are statistically significant ($F(2, 195) = 50.8$, $p < 0.001$). More specifically, the Games-Howell post-hoc tests showed that the differences were significant between: Romania and Greece ($t(151) = -5.95$, $p < 0.001$), Romania and Belgium ($t(188) = 12.4$, $p < 0.001$), and, respectively, Greece and Belgium ($t(192) = 18.3$, $p < 0.001$).

Greek participants reported higher means regarding concerns and needs such as students' attitudes towards subjects in the classroom, teaching approaches, cognitive development, behaviour management, students' attitudes about peers with learning difficulties, available resources for teaching students with LD in the mainstream classroom, difficulties in learning particular subject areas, collaboration with parents, enhancing teaching methods for students with LD, the use of feedback. Similarly, *Romanian* participants reported higher concerns regarding the following areas: strategies for the cognitive development and behaviour management of students with LD, students' attitudes about peers with learning difficulties, difficulties in learning particular subject areas, the teacher's own inability to manage learning difficulties in the mainstream classroom, collaboration with parents, enhancing teaching methods for students with LD, the use of feedback. *Belgium* respondents are mostly concerned about cognitive development and behaviour management strategies, available resources for teaching students with LD in the mainstream classroom, how to design educational materials for LD, collaboration with parents, the use of feedback.

3.4.Integrated curriculum use

Regarding the use of integrated curriculum strategies in teaching, the comparative analysis showed that teachers in Romania have the highest average level of use of these strategies (M = 108.5, SD = 16.9), closely followed by teachers in Greece (M = 107.1, SD =

17.6) and those from Belgium (M = 98.8, SD = 11.3). According to the Welch's ANOVA test for unequal variances, these differences are statistically significant ($F(2, 189) = 27.3$, $p < 0.001$). The Games-Howell post-hoc tests showed that the differences were significant between: Romania and Belgium ($t(235) = 7.34$, $p < 0.001$) and, respectively, Greece and Belgium ($t(142) = 3.81$, $p < 0.001$).

3.5.Methods of teaching Mathematics

Romanian respondents listed the following methods for teaching Mathematics: graphic, visual methods; individual work (worksheets, homework); explanations; exercises; didactic play; modelling; computer assisted teaching; teaching through discovery; interactive methods; classic teaching.

Belgium participants had consistent responses and they teach Mathematics using supportive tools (tablets, calculator, abacus, notepad); whiteboard, smartboard; pitch cards.

Greek participants mentioned a variety of methods, the most common of which are: the CRA method (Concrete-Representational-Abstract), natural and virtual manipulatives, teaching using video (video-modeling, video-prompting, video self-modeling, point of view video modeling), diagrams, bar graphs, graphs; materials produced by EPSYPE (Child and Adolescent Psychosocial Health Society); multi-sensory method; interactive whiteboard; drawing and symbols using fingers and visual material.

3.6.Methods of teaching Reading

Regarding the teaching of reading skills, *Romanian* teachers mainly use the following methods: graphic, visual methods; explanations, exercises; didactic play; differential learning; reading out loud; conversation; phonetic method; role playing; concrete-intuitive method; storytelling; interactive methods.

Belgium teachers mainly use modern technology for teaching reading: Alinea software; smartboard/whiteboard, tablets, notepads.

Greek teachers reported the use of the following methods: differential teaching; analytic or syllabic method; use of special software, visual aids; a multi-sensory approach, which includes touching mobile letters, drawing letters and pronouncing their sound, creating syllables

and then words; demonstrating the process and / or steps the child needs to follow, repetitively; holistic method, phonetic method; theatrical game.

3.7.Methods of teaching Writing and Spelling

In *Romania*, teachers use mainly the following methods for teaching writing and spelling skills: dictation; worksheets; tracing; copying text; multisensory methods; demonstration; exercises; project method; imitation; prompting; phonetic-analytic-synthetic method; group spelling method; Montessori method.

In *Belgium*, teachers use repetitive spelling, whiteboard, notepad, use of capital letters for beginners.

In *Greece*, the following methods were listed most frequently: using modeling or video modeling in which one of the child's classmates is shown to demonstrate the desired target behavior; visual organizers; multisensory method; materials produced by EPSYPE; letter recognition, fine motor skills, pencil holding, syllabic writing; interactive map; differentiated/ adapted teaching; pre-writing exercises.

3.8.Identifying students with LD

In *Romania*, teachers identify students with LD in the following ways: observation (differences in performance tests on writing, reading, mathematics; behavioral observation – they are inattentive in classes, they have poorer language skills than peers); initial and formative assessment; with help from the school's psychologist; observing the differences in performance between them and peers; they learn much slower and give simpler answers; psycho-pedagogical assessment.

In *Belgium*, the identification of students with LD is done early on by the school administration or system and the teachers don't have an active role in this process. The situation provides proof of a well-organized system and high specialization of each profession.

In *Greece*, the identification of students with LD is done by employing several strategies, as follows: observe the difficulties that the student might show, the performance and the deficiencies of the students; collect the history of the family, observe how the child learns; observe their writing and reading skills, identify the students that keep having difficulties in

reading and mathematics even though I have explained them repetitively; using validated diagnostic approaches and tools or informal methods of assessment like writing and reading samples.

3.9.Assessing students' cognitive skills

Methods used in *Romania*: standardized, specific tests for measuring cognitive abilities; observing their performance in oral, practical and written tasks; analyzing the products of their academic activities; analyzing problem solving skills; psychological testing done by another professional (psychologist).

Methods used in *Belgium*: dedicated tests, exercises; continuous evaluations of their performance in cognitive areas.

Methods used in *Greece*: children's achievement in tests/ exams/ trials; continuous questions on multiple/ different/ several items; written and oral tests; standardized and qualitative tests; observation; the assessment process includes: a) a questionnaire from a student, parents and any teachers involved, b) personal (contact) estimation through (with) activities in various areas of cognitive functions (memory, perception etc.) to gather information on how the child learns, but also the with an organized process of selecting information (strategy selection process), and, c) application of necessary (supportive) hardware.

The need for training regarding cognitive education of students with LD was close to maximum in all three countries: Romania (92.2%), Belgium (100%), Greece (94.3%).

3.10.Managing challenging behaviors of students with LD

Managing challenging behaviors is a key point in educating students with LD and specialists all around the world use structured and less structured methods. The the analyzed countries, the participants mentioned using a variety of methods and the most frequent are listed below.

Romania: discussion, conversations, explanations, reading stories about good behavior, therapeutic stories, role playing, group games, assertive communication in interacting with the students, behavior monitoring, positive reinforcement, elimination of triggers (when possible), ignoring the challenging behavior, methods of attention distraction, talking with the parents, school counseling for the student.

Belgium: discussion, active listening, understanding the student's perspective, keeping a calm attitude.

Greece: discussion about the rules, observation, positive and negative reinforcement, social stories, role playing representation of wrong/ right behavior, collaborative methods, project method, teaching and strengthening self-esteem, self-regulation; the STAR system; the model by Greenberg, Speltz and Delyn.

The need for training regarding strategies to manage challenging behaviors of students with LD was very high: Romania (93.7%), Belgium (96.4%), Greece (96.6%).

3.11.Cultivating empathy in students with LD

Empathy is a protective factor for burnout in students (Farina et al., 2020), an ability that helps them to have better relationships in school (Wang et al., 2018) and, indirectly, to have a better academic performance (Making Caring Common Project, 2018). That's why we wanted to see what methods education specialists use to cultivate empathy in students with LD.

Romanian participants reported the use of the following methods: collaboration with students, role playing, group talk, debates, therapeutic stories, personal example, active listening, bonding with students, social reinforcement, non-discriminative practices in school.

Belgium respondents use strategies such as: talking, understanding, discovering students, discovering their personality, attitudes, talents; sharing with students.

Greek participants build empathy by group collaboration, experiential teaching, role playing, social stories, assistive technology, understanding and respecting individual differences.

3.12.Collaboration with the students' parents

In *Romania*, teachers use diverse methods to collaborate with the students' parents, among which me mention the most commonly reported: individual meetings, telephone/online communication, discussions, regular group meetings with all the parents, assertive and honest communication.

In *Belgium*, similar methods were reported: dedicated meetings, regular parent meeting, phone calls when necessary, emails.

In *Greece*, the collaboration with parents is facilitated by meetings, communication notebook, telephone/email communication, positive reinforcement of parents' work and encouragement for implication in the students' academic life.

The need for training regarding collaboration with parents was very high in all three countries: Romania (89.4%), Belgium (99%), Greece (99%).

3.13. Quality of education for students with LD

Finally, we asked participants to rate the education quality for students with LD in their current work setting. Romanians reported the lowest quality of education compared to the other countries, but still, the reported quality was moderate ($M = 3.31$, $SD = 1.01$). Greece reported a moderate to good quality of education ($M = 3.52$, $SD = 0.74$) and Belgium reported a good education quality ($M = 4.04$, $SD = 0.55$). Welch's ANOVA showed significant overall differences between the 3 countries ($F(2, 215) = 54.7$, $p < 0.001$). The post-hoc tests showed that the differences were significant between Romania and Belgium ($t(298) = -10.42$, $p < 0.001$) and, respectively, Greece and Belgium ($t(157) = -5.40$, $p < 0.001$). In conclusion, Belgium reported the highest quality of education for students with LD, compared to the other two analysed countries.

4. Discussion

The purpose of this survey was to quantitatively and qualitatively investigate the perspective of education specialists on students with LD in Romania, Belgium, and Greece. The following relevant aspects were captured: attitude and knowledge about learning difficulties, concerns about teaching students with LD, integrated curriculum use, methods of teaching Mathematics, Reading, Writing, and Spelling, methods for identifying students with LD and assessing their cognitive skills, management of challenging behaviors, parent-teacher relationship, methods of enhancing empathy in children with LD, and quality education. With the help of the obtained results, we will create a digital learning and support platform for professionals who educate children with LD.

Regarding *attitude and knowledge about learning difficulties*, similarities and differences between the three countries emerged. In the 3 countries, most participants reported that the place where they work is supportive of teachers who teach students with LD, that they

use assistive technology in teaching and, at the same time, they would like to know more about the technologies they could use for students with LD. Assistive technology has proven to be useful in the learning process of LD students, in the sense that there are software and devices that improve learning outcomes and, at the same time, increase learning satisfaction. Of course, there is no single solution for all cases, so it is recommended to customize the methods according to the characteristics of students (Perelmutter et al., 2017). In addition, the need for parental involvement in the homework of children with LD is recognized by the participants in this need analysis. The involvement of parents in the school life of students, especially those with learning difficulties, is seen as a beneficial factor, which helps both the child and the educator to improve the education provided. Also, children who receive help from their parents may have better academic performance, compared to those who struggle without family help with schoolwork (Nichols, 2000).

As stated before, some differences emerged. In Romania, most participants believe that the special scientific staff should be exclusively responsible for students with LD, not the classroom teacher. In contrast, in Belgium and Greece only a quarter of participants share this belief. These differences can be explained by the fact that most participants from Romania work in mainstream schools, not in special schools or special education (as participants from Belgium and Greece) and they don't have the necessary training to manage students with LD so it makes sense that they prefer other specialists to take responsibility to students with LD. In the other two countries, most educators have training in special education. This result highlights the stringent need for training teachers in Romanian mainstream schools in educating students with LD.

Most Romanians and Greeks consider a student with LD to be additional workload for the teacher, while only a minority of Belgium teachers (22.5%) believe the same way. In general, the consensus is that learning disabilities are associated with greater workload and teacher burnout risk, especially if the disabilities are severe (Male & May, 2003; Male & May, 2009).

Regarding the *concerns and needs associated with teaching students with LD*, Greece reported the highest average level of concerns, closely followed by Romania. Belgium reported the lowest level of concern. Qualitative analysis of responses showed that most concerns and needs are common in the 3 countries: cognitive development and behaviour management strategies, available resources for teaching students with LD in the mainstream classroom, how to design educational materials for LD, collaboration with parents.

Integrated curriculum use was high in all countries, with the highest values in Romania, closely followed by Greece and Belgium. In the first two countries, the teachers have a lot of liberty in designing lessons and applying teaching methods. Each teacher decides how to teach a particular lesson and there are very few generally accepted models about how to teach a specific lesson or skill. Also, the educational policies for students with LD are rather general and each educator care choose what believes it's best for a particular student or lesson. The educational systems in the first two countries are managed by a national ministry and it is hard to employ specific and detailed procedures of teaching. In contrast, in Belgium there isn't a national ministry, but several ministries of education depending on the community. Therefore, it is easier to tailor specific teaching strategies based on the characteristics of that community.

The *methods of teaching Mathematics, Reading, Writing, and Spelling* are diverse in all countries (e.g., assistive technology, multisensory methods, coral and individual methods, explanations, exercises, written and oral methods, stories, role playing). However, we can observe the tendency of Belgium teachers to use mostly modern technology in teaching (tablets, smartboards, educational software) compared to the other two countries. This tendency can reflect differences in material resources or class facilities. In Romania for example, very few classes have smartboards or tablets and often this happens in privileged schools from urban areas. The social disparities are very high and negatively influence education in this country, so teachers need to be very creative and use any material at hand to provide good education.

It is widely accepted that students with LD should be identified as early as possible in the educational path so they can receive proper help as soon as possible (Kronenberger & Dunn, 2003; Shah et al., 2019). In general, teachers have an important role to play in *identifying these students*, given that many learning difficulties become problematic at the beginning of school. From the analysis performed by us, in Romania and Greece teachers use didactic and pedagogical methods to identify these students (oral / written tests, observation of differences in performance compared to other students, analysis of academic activity products, etc.). The situation is different in Belgium, where the diagnosis or identification of learning difficulties is made by other specialists, not by the teachers in the class. This procedure can be an indicator of a well-developed education system that conducts effective early screening of children with LD before they are educated. This makes the work of teachers easier because they already know which students have difficulties and can prepare with appropriate teaching methods.

Regarding assessment of cognitive skills, managing challenging behaviors, cultivating empathy, and collaboration with parents, all countries reported similar methods and strategies. Moreover, in all countries there is a very high need for training in the area of cognitive education, challenging behavior management, and collaboration with parents of students with LD.

Limitations

The results obtained from the survey must be interpreted taking into account several limitations that we will set out below. First, the groups of participants in each country are not nationally representative, as convenience sampling method was used. By using this method, most likely we attracted professionals interested in the LD topic, who, presumably already have some knowledge on the matter. The high percentages of training needs in the areas of cognitive education, challenging behaviors, and collaboration with parents might be partially inflated by the sampling method used (especially in Belgium and Greece where there was a small number of participants).

Moreover, there are large differences in sample size between Romania and the other two countries, showing how hard it is to collect LD data in countries such as Belgium and Greece. Belgium is a federation, and widespread access to teachers is difficult. The system is very well organized and specialized, and teachers in mainstream education meet less often with students with LD. In Greece was also difficult to collect more data, despite the fact that there seems to be an interest in the topic. The sample characteristics were different in the analyzed countries and this might bias some results. For example, most participants from Romania work in mainstream schools and the results reflect their understanding of the phenomenon and their methods. In contrast, most participants from Greece work have competences in special education and this is connected with a deeper understanding of the LD topic and different teaching methods.

In conclusion, in all three countries there is a big need for training in the area of learning difficulties, especially in cognitive education, managing challenging behaviors, and parent-teacher collaboration. The results will provide the basis for designing a digital platform with free courses and resources for professionals interacting with students with LD.

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