

# CORTTEX

## Newsletter

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# CORTTEX

COGNITIVE RESOURCES  
FOR TODDLERS TEENS  
AND EXPERTS



Employing novel teaching strategies, methods, technologies and knowledge to increase learner quality of experience, improve learning process and cognitive development.

## Needs of teachers regarding the education of children with learning difficulties – IO1

The first result of the CORTTEX project is a research survey on Cognitive education and quality of education for children with learning difficulties (IO1). The study focuses on the three main Countries involved and it is based on desk research and on a dedicated survey shared with teacher and training staff of Belgium, Greece and Romania. More than 600 replies have been collected, which allowed the partnership to get an in-depth overview of the situation on the countries involved. In particular, 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.

Teachers 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  $M = 44$  ( $SD = 8.69$ ). Teachers 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 old and had a mean age  $M = 29.6$  ( $SD = 9.52$ ).

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.

Our research allowed us to appreciate that 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. 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.

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

This report is the first result of our action ad allowed us to present the current state of affairs regarding the situation of students with learning disabilities in Romania, Belgium, and Greece, but also to analyze the needs of specialists working with students with learning difficulties in these three countries. It is also the base document for the development of a platform for educational resources addressed to specialists in their work with these students with learning difficulties.

## **Attitude and knowledge about students with LD**

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. In addition, the need for parental involvement in the homework of children with LD is recognized by the participants in this need analysis.

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.

## **Concerns and needs regarding teaching children with LD**

*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.

### **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.

### **Methods of teaching Mathematics, Reading, Writing, and Spelling**

Methods 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.

### **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%).

### **Collaboration with the students' parents**

In *Romania*, teachers use diverse methods to collaborate with the students' parents, among which we 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%).

### **Quality of education for students with LD**

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 ( $M = 4.04$ ,  $SD = 0.55$ ).

Belgium reported the highest quality of education for students with LD, compared to the other two analysed countries.

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.

Download the full analysis [here](#).

## **The road to the Training modules, the CORTEX NEED Analysis**

This report, which presents the current state of affairs regarding the situation of students with learning disabilities in Romania, Belgium, and Greece, and analyses the needs of specialists working with students with learning difficulties, it is also the base document for the development of a platform for educational resources addressed to specialists in their work with these students with learning difficulties. In particular, Four Training lessons have already been developed in English and are now under evaluation by the partnership:

1. Assistive technology for teachers;
2. Assessment and early detection of students with Learning Difficulties;
3. Parents cooperation strategies;
4. Emotion and behavioral regulation strategies.

These 4 lessons have been developed as e-Learning multimedia interactive digital lessons (O4). Each digital lesson contains: the educational material, photos, links and supportive material, bibliography, questionnaires, user's progress report. The digital lessons are accessible from PC or mobile devices. These digital lessons were uploaded on the e-learning platform in order to be evaluated by the partners and to identify areas that need improvement. The comments arising was collected and used to improve the digital material.

The remaining 4 lessons are under development by the University of Bucharest team.

## CORTTEX Project Partnership



**University of Bucharest (RO):** It is considered to be the most important educational, research and cultural institution in Romania and one of the most important scientific research centres nationwide. Within the University, there are over 50 research institutes, departments and centres, most of them collaborating with similar scientific centres abroad. The University of Bucharest is part of a reliable network of international collaboration – 300 bilateral collaboration agreements have been signed with universities in 52 countries. [www.unibuc.ro](http://www.unibuc.ro)



**University of Macedonia (GR)** The Department of Educational and Social Policy at the University of Macedonia is the only Department of Higher Education in Greece that is responsible for training teachers and other professionals working with children with Autism Spectrum Disorders. The Department implements contemporary teaching models on Autism Spectrum Disorders and places students for apprenticeships in special, mainstream, preschool, primary, secondary, technical vocational school units all over the country as well as in institutions abroad through several programs like Erasmus, AISEC, etc. [www.uom.gr](http://www.uom.gr)



**TEACHER TRAINING CENTRE BUCHAREST - CCD (RO)** The mission of the centre is to promote innovation and education reform, optimal framework for the professional and personal development of pre-university education staff, and to ensure the continuous training of the pre-university education staff. Activity areas: training of pre-university education staff, field of methodical, scientific and cultural activity, information documentation consulting, offer of continuous annual training through accredited / approved courses, initiation, development and implement of continuous training programs [www.ccd-bucuresti.org/](http://www.ccd-bucuresti.org/)



**Inte\*Learn (GR)** INTE\*LEARN was founded in April 1989 by a team of experts in Computer Assisted Learning. It aims at introducing and consolidating information technology in the educational process. It is specialized in instructional design and implementation of digital educational environments and applications; implementation of tests to measure developmental characteristics of students (ie language difficulties); implementation of tools to support the educational process, and research and development [www.intelearn.gr](http://www.intelearn.gr)



The **European Association for Mental Health in Intellectual Disability (EAMHID)** provides a platform for academics, health professionals and policy makers. The purpose of the Association is to facilitate international cooperation and exchange of knowledge and experience in the field of mental health in people with an intellectual disability [www.eamhid.eu](http://www.eamhid.eu)

Welcome to our newsletter! We will keep you updated of what we have been doing in the framework of the **CORTTEX project**, including events and the outputs produced by this Erasmus+ initiative

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