Teaching Learners with Dyslexia

Foreign Languages

Dyslexia

A series of special education teaching guides

Inclusion in Europe through Knowledge and Technology

Project no: KA201-2015-012

Teaching Foreign Language to Students who have Dyslexia

Contents

Inclusion in Europe through knowledge and technology

Information on the fundamental principles, practices, educational material and teaching aids used to teach various subjects to students with special needs are few and far between. In some cases, material has been prepared for internal use at specialised schools or in other closed environments. In other cases, knowledge has been passed from teacher to teacher as part of workplace training.

No systematic material on pedagogical principles, practices, educational material and teaching aids exist for areas such as teaching first language teaching, foreign language teaching, mathematics and music for the blind.

With this in mind, the goal of this European project is to further develop, implement and disseminate good practices in the area of inclusive education and learning technologies by delivering three primary components: *Teaching Guides*, Guide on g*ood practices Inclusive learning and Teaching* and *SMART E-learning objects*.

Teaching guides

In completing the project, RoboBraille partners have created a series of twelve educational guides covering fundamental principles, practices, educational material and teaching aids covering first language teaching, foreign language teaching, mathematics and music for the blind, partially sighted and dyslexic.

Inclusion guide on good practices for inclusive learning and teaching

In support of this, the project has collected and collated information on good inclusion practices in five select areas (teacher skills, alternate media, support structures, preparation for inclusion and teaching environments) which are published in a catalogue of good practices.

SMART e-learning

Finally, the project will adapt a comprehensive set of educational material on the RoboBraille service prepared in the LLL LdV RoboBraille SMART project into a set of learning objects for popular e-learning platforms for web and tablet deployment.

For all materials produced by this project

Because the material covers teaching of students of various age, they are named students, learners, pupils and children. The material also reflects the different culture and level of inclusion practices of the project partners. The guide is not a substitute for formal training of teachers.

Introduction to this teaching guide

Dyslexia is by now a widely known but poorly understood specific learning disability. It can be difficult to define because the causes underlying its measurable manifestations can be very variable. However, dyslexia is a real problem, which affects the learning of reading and writing of many individuals and whose effects may be exacerbated by an inadequate education. The complexity of the problem is increased by the fact that dyslexia and reading and writing difficulties may vary according to the cultural and linguistic background.

There are several definitions of dyslexia but probably the most frequently used on is the definition introduced by the **International Dyslexia Association** (IDA) in 2002: "*Dyslexia is a specific learning disability (SpLD) 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.*"

Dyslexia is a hidden disability thought to affect around 10% of the population, 4% severely. It is the most common of the SpLDs.

Dyslexia affects reading, spelling and writing, and thus - all learning activities, including learning a foreign language.

Specialised pedagogies for teaching foreign language to students with dyslexia

Along with communication and action - oriented response approaches that place the learner at the centre of the education process, foreign language teachers must always take into account the specific characteristics of the learner, their needs, interests and differences in learning style; the specifics of their natural language and culture.

There are four main linguistic skills needed to achieve language proficiency: understanding spoken language (listening), speaking, understanding written language (reading) and writing.

The European common criteria for Languages (CEFR) include communication as a basic language skill that should be formed and developed along with the above four.

As already mentioned, dyslexia causes difficulties - in mastering reading and writing in the native language, and therefore also in the formation and development of the same skills in learning a foreign language.

These difficulties could be observed in all four aspects of the foreign language acquisition: Reading, Writing, Listening and Speaking.

Challenges relating to the disability/specific learning difficulty

The most severe difficulties that may be observed for students with dyslexia when learning a foreign language are:

- Discrimination on the sounds of the target language.

- Pronunciation of some of the sounds of the target language.

- Difficulties with morphology and syntax.

- Difficulties with vocabulary acquisition.

- Difficulties with retrieving words.

- Difficulties with applying the grammar rules.

- Difficulties with the coding (reading).

- Difficulties with writing under dictation.

- Difficulties with Spelling.

- Difficulties in dealing with tests.

- Difficulties with taking notes.

This does not mean that a person with dyslexia cannot learn a foreign language. On the contrary, the teacher must assume that it is entirely possible - especially if the teaching approaches in the early stages of learning a new language are close to the mechanism of mother tongue acquisition.

It is important that the teaching approach is:

- Structured

- Sequential

- Multisensory

- Full of repeated positive feedback

When learning a new language, one often finds that the language includes some sounds that do not exist in our native language. These sounds can cause difficulty – to be perceived and/or to be pronounced by a student with dyslexia.

Phonetic abilities are often overlooked in teaching a foreign language, but they are extremely important, especially for students with dyslexia who are more prone to problems with phonological perception and processing. It is very important that the foreign language teacher draws the attention of the students to the similarities and differences in the sounds of the two languages (native and foreign); to teach them how to distinguish between sounds and to pronounce them correctly.

*The competence in a spoken language consists of the ability to use the sounds that form words and sentences, in order to convey meanings. In order to speak we need to be able to articulate, through particular movements of the oral articulatory organs, the sounds of our language and, in order to understand the spoken language, we need to recognize the same sounds in all the various auditory stimuli, that we perceive in the surrounding environment (*Nespor, M. & Bafile, L., 2008).

For students with dyslexia, phonetic abilities are often insufficient. The phonological difficulties they have in their native language are usually "transferred" to the foreign language that they study. The students may find it difficult to recognize and assimilate the different phonetic models in the new language just as a result of simple exposure. (Daloiso, 2011).

To be able to talk and communicate in a new language, one must be able to distinguish and reproduce (pronounce) the sounds of the language through the proper motions of speech apparatus. First, when confronted with a new sound, we must understand what articulation bodies involved in shaping the sound, how to locate and move to properly reproduce the sound and then to make it a habit pronunciation. It is therefore essential that the teacher is fluent in the language he/she is teaching, in order to give the students adequate instructions in order to achieve the best possible control of the sound system of the language learners.

For example, the sound in the first syllable of the English word "think" does not exist in the Bulgarian language (as in most European languages). Hence, a Bulgarian native speaker may have problems with distinguishing the sounds [θ] and [t] in the beginning of the learning process. The manner of articulation of the sounds [t] and [θ] are very similar, and in addition, the way of forming the Bulgarian sound [f] resembles greatly that of the formation of the English [θ].

The morphological and morpho-syntactic aspects of the language, as well as the phonetic-phonological ones, that are aquired implicitly in the native language, and – to some degree, in the foreign language, usually cause problems for students with dyslexia in both languages.

The teacher must be aware of major morphological differences between the two languages in order to foresee the possible difficulties students may face. It is important to remember that the syntactical difficulties some students with dyslexia encounter can seriously affect their ability to master the new language. Several studies show that between 50 and 80% of children with difficulties in speech development in the early childhood, show symptoms of dyslexia at a later school age.

Modern methods of language teaching favour the formation and development of communication skills and the use of a rich vocabulary rather than the syntactic aspects of language. It is believed that the formation of even a limited vocabulary enables understanding and communication at the elementary level and this could be a basis for learning the syntax at a later stage.

Students with dyslexia often have difficulties with learning a new vocabulary. This is caused by the deficit in the phonological memory and because of problems with long-term memory (word retrieval). This may lead to a significant difference between passive and active vocabulary.

Students with dyslexia who have difficulty with learning a foreign language are subjected to serious cognitive load. This, added to the problems with phonological working memory and long term memory, can make learning a foreign language extremely difficult. In most cases this is the case if the teacher prefers to teach the language explicitly. This style of teaching relies on explicit memory and requires substantial resources in terms of sustainability, volume and switching of attention which is often a problem for students with dyslexia.

Languages can be very different in terms of their orthographic systems – particularly the degree of grapheme-phoneme correspondence. Amongst the European languages, the most transparent is Finnish, and the most opaque – English. German, Greek, Turkish, Bulgarian, Czech, Italian and Spanish are fairly transparent languages; Danish, French and Portuguese are essentially opaque languages.

In Italian, there are 25 phonemes, which are represented by 33 graphemes or combinations of graphemes; in French: 35 phonemes are represented by 190 graphemes or combinations of graphemes and for the presentation of the 40 phonemes in the English language 1120 graphemes or combinations of graphemes are used.

The degree of compliant phonemes - graphemes in a language, strongly influences the methods of teaching reading and writing. As a consequence the manifestations of dyslexia in different countries depend on the spoken language in terms of incidence and the severity of difficulties encountered by learners. Orthographic difficulties that a student with dyslexia has in his native language inevitably will be transferred to any new language he/she studies. Only in the case of the new language being more transparent than the native one, it is possible that the student may find the spelling easier than in his/her mother tongue.

The difficulties mentioned before may result in:

- High levels of frustration.

- Fluctuating efficiency.

- Fatigue.

- Demotivation due to the difficulties encountered.

- Defensive strategies (avoidance, bypassing, passive resistance)

A description of suitable teaching methodologies and practices

To ensure adequate efficiency of the process of teaching and learning, it is necessary to know how our brain works when we try to learn a foreign language.

The mother tongue acquisition happens mainly through imitation.

For this reason, especially when it comes to the early stages of learning a new language it would be very effective if teaching and learning are based on the same mechanism.

Activities based on associations can support memorisation, especially in the presence of factors such as:

- Positive emotions,
- Multi-sensory stimuli.
- Creative, interesting and meaningful activities.

What to do in the classroom?

Create a welcoming atmosphere in the classroom

First of all, before taking any steps towards teaching, the teacher may focus on creating an atmosphere of cooperation, mutual assistance, curiosity and trust in the classroom. Then he/she can introduce the term "diversity", as something positive to promote integration and inclusion in the class. The teacher may start with a paragraph from a book, a scene of a film or a song ... in order to provoke students to engage in a discussion about different tastes, interests, dreams, diversity of languages and cultures, religions and traditions. At the end of the discussion he/she can explain how diversity is reflected in the different ways in which students learn. This way the teacher will be able to create an atmosphere that will aid the learning process and take away any anxiousness. Students will feel comfortable and more able to cope with different learning activities.

Structured learning activities

1. At the beginning of a lesson, the teacher may introduce an activity aimed at provoking students' interest and curiosity and hopefully thereby motivate them for the tasks to come.

2. Second -to present the main topic of the lesson and upcoming activities to achieve a general understanding of the topic.

3. The main aim of the teacher is for the students to completely understand what is being taught. This may be achieved using a series of targeted exercises, followed by another group of activities aimed at reflection giving the students an opportunity to intercorporate any new knowledge.

4. The teacher may do an informal test (to check what students have understood and learnt) and then dedicate some time at the end of the lesson for leisure activities (of course, associated with teaching the topic of the lesson), as a kind of reward for the efforts of students and an extra opportunity to practise the language.

It is important to remember that in order to increase the efficiency of the teaching process, it is necessary that each school activity is clearly explained in advance so students are aware of what they are expected to do, how to do it and what the purpose of the activity is. As Pontecorvo (1995) said "Knowledge of the objectives allows anyone who is studying to direct its activity and its interest, and it is true that students learn sooner and better if they know (and understand) the objectives of their work". This is even more true when it comes to students with dyslexia because they are very often easily distracted, and have difficulties finding the link between a particular exercise and its purpose. Such an approach prevents the student from creating incorrect mental picture of the task and respectively to form a wrong attitude, which can eventually lead to failure to complete the task. So when the teacher explains the task (and its objectives) he gives the learner an algorithm and following him, the student will be able to cope more easily with the task.

Useful tip

Regarding reporting and correction of errors, it is important to remember that:

If errors occur in the oral production, the teacher should avoid correcting them explicitly. The teacher should show he/she has understood the message, and respond using the student's words as much as possible, but with the correct syntactic form or pronunciation.

For example, if the student says "The tree are green", the teacher should respond: "Oh, yes. That's right. The tree is green!"

If errors occur in written production it is generally better to clearly delete them rather than highlight them. During study, students tend to highlight the important parts, those they want to remember. Because some dyslexics have a good visual memory, they are likely to remember the highlighted forms, so in case of a highlighted forms and may internalise the error!

The teacher should keep in mind that:

- For students with dyslexia writing homework can be quite tiresome and time-consuming activity than for the others, so it is appropriate to reduce the volume of homework, without compromising the quality;

- It is important to use sustainable terminology (avoid the use of synonyms when giving instructions);

- it is better to teach the new material gradually (one new element at a time);

- The most important concepts or ideas or facts to be repeated several times - both within the lesson, and during the next several lessons.

For students (especially for those with dyslexia) it would be helpful if teachers:

- pay attention to the graphical aspects of the provided printed materials (font, font size, background, etc.)

- Provide, beforehand a plan or a mind map on the topic that will be discussed;

- explain the benefits of using mind maps and teach students how to prepare maps themsleves;

- Cooperates with the family to make sure that the student will receive adequate support at home to deal with school work.

Strategies, methods, approaches to teaching/learning a foreign language

There is not only one approach, there is no single strategy, both for teaching and learning, but there are strategies to suit different situations. Therefore, it is not superfluous to repeat that not a single method, but multiple methods are to be used. (Gabrieli & Gabrieli, 2008, p. 18)

Below are present several approaches that are found to be appropriate in teaching dyslexic learners (all of them are equally good for all other students).

The multi-sensory approach

Sending different information to the brain in different sensory channels (visual, auditory, tactile, kinestatichen etc.) facilitates the storage and playback of information, and therefore - and the learning process. Offering multi-sensory activities increases the effectiveness of teaching and learning, including for students with dyslexia. Of particular concern to them is the use of movement as part of the learning process in general and language learning in particular. Associating language with a certain movement, and therefore the association of a linguistic element with specific action leads to wider multidimensional and stable mental image of this element and its absorption.

Total Physical Response (TPR)

Developed in the late 1960s by James J. Asher, TPR-method is based on the full participation (both physical and psychological) of students, trying to make the foreign language learning as similar to the mechanism of the first language acquisition. TPR is based on two assumptions: 1) The understanding always precedes the speech production; 2) There is a "silent period" (when one, although no speaking, but can understand the spoken and written language at some level) that should be taken into account to avoid frustration.

TPR uses simple verbal instructions (commands) to introduce elements and language patterns. For example, the teacher gives a command, associating it with the corresponding movement, and the student must respond physically, by making the appropriate action (Stand up: the teacher stands up and asks the student to stand up etc.). This must be done immediately, without analysing the action.

After repeated activities of this sort, students are ultimately able to create their own commands and order each other to move around the room performing certain actions.

- http://www.onestopenglish.com/methodology/methodology/teaching-approaches/teaching-approaches-total-physical-response/146503.article
- https://www.teachingenglish.org.uk/article/total-physical-response-tpr
- http://www.slideshare.net/asmarany3/total-response

- https://www.youtube.com/watch?v=1Mk6RRf4kKs

Cooperative learning

The cooperative learning is an educational movement that includes a set of teaching and learning approaches based on cooperation between students and is aimed not only at developing specific competencies (for language learning) but also social skills, often overlooked by traditional approaches. The method puts the focus on using learners' resources, rather than teacher's ones. It emphasises the student-student interaction and helps students learn from each other, to gain a broader outlook, to share feelings, ideas, concerns, and improve self-esteem. The cooperative learning method can be used as a "compensatory tool" for learners with dyslexia who have not yet developed good competences in the foreign language they study.

Shared Ideas

"Folded value line" is just one example of a cooperative learning activity which could be used in the language classroom. The teacher gives a statement, e.g. "Every child needs a pet". Each student has to value his/her opinion regarding the statement from 1 to 6 (1- strongly disagree; 6 – strongly agree). Then all students form a line, where those who gave "1" stay at one end, those who gave "6" – at the other end of the line.

The students first talk to the person next to them and share their (obviously similar) views and reasons for their opinion. Then each pair talks to the "neighbour" pair and they exchange ideas and opinions on the topic. The next step is to divide the line in two halves that form two parallel lines of students facing each other.

So in a class of 20, the line would be divided between persons 10 and 11. Person 1 would speak to Person 11, Person 2 to Person 12, etc. Students now have the opportunity to talk to someone whose opinion is different from their own.

After this, 1 or 2 students could be selected to summarise the different views they had heard or they could be asked to orally represent a viewpoint that greatly differed from their own, thus encouraging them to appreciate different viewpoints.

Follow-up to Folded Value Line can include research, development of a paper, a class debate or other activities.

Format Approach

This approach developed by American psychologist Bruner in 1975, uses events, repeated in a similar way every school day in order to exercise and repeat the act of communication. In this way, learners can share experiences, exchange items to make everyday gestures, etc., always combining words with actions and/or specific items. It requires many repetitions before students are able to get the words out of context, to acquire the meaning and to start

using words in their active vocabulary. This approach is mainly used with children of pre-school and primary grade, but it could be very appropriate for older learners, especially if they have difficulties cause by dyslexia.

Storytelling

The approach involves the use of narrative and relies on more than one perceptual channels. The teacher tells short stories using different "languages" – pictures, sounds, facial expressions, gestures, dramatization, and various media. Thus provoking the imagination of students, which makes the process very attractive not only for small students, but for adult learners as well. Of course, the content of the story has to be selected according to the age and interests of learners at the same time taking into account their current linguistic competences in the foreign language they learn. Useful info could be found at:

- https://www.teachingenglish.org.uk/article/story-telling-language-teachers-oldest-technique

- http://www.edweek.org/tm/articles/2012/04/02/tln_borich.html

Ludic approach

The aim of this approach is to stimulate learning, offering students fun and playful activities with no stress. Such activities raise and maintain motivation and lead to total involvement of students. In fact, this type of activities require the inclusion not only at cognitive level, but also at linguistic, sensory-motor and emotional levels. This is the best way to perceive and learn things by activating all senses of the learner. Of course, it is important that these tasks are easy to perform and include the widespread use of oral speech.
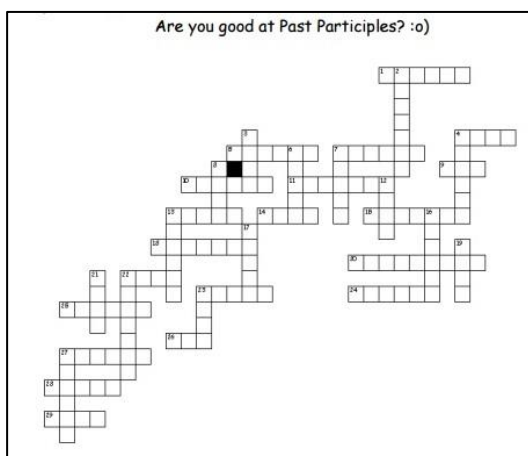
Shared Ideas

Figure 1: Example of using crossword when teaching English

Across ➡	18. Write	Down ⬇	13. Turn
1. Speak	20. Forget	2. Paint	16. Get
4. Be	22. Come	3. Make	17. Know
5. Wash	23. Spend	4. Buy	19. Send
7. Drive	24. Break	6. Eat	21. Read
9. Put	25. Play	7. Drink	22. Clean
10. Choose	26. Have	8. Go	23. Say
11. Think	27. Cook	12. Tear	27. Close
13. Take	28. Find		
14. Do	29. See		
15. Bring			

Figure 2: Example of using crossword when teaching English

Every boring grammar rule can be turned into a funny game.

- http://www.repositorio.ufal.br/bitstream/riufal/434/1/Dissertacao_SorayaFernandesdaSilva_2007.pdf

The use of mind maps and concept maps

The teacher can help the understanding of learning material using visual aids such as Power Point presentations or maps (Mind maps or Concept maps). They attract the attention of students, support understanding of new concepts and information. The use of mind maps has proven to be very useful in helping students with dyslexia (in practice it is useful for all students) in the process of extracting information from text, organising this information, remembering it and its effective implementation.

Mind maps use images, colours, shapes and symbols to presenting information in a visual, structured way that is easier to be perceived, understood and remembered.

Students, especially high school students, those in colleges and have to deal with a significant amount of written works. For students with dyslexia sometimes this seems like an impossible task. But when you prepare a mind map, you can "see" your ideas, "move" them around, rearrange them, organizing in different ways, until finding the structure that will best present your ideas and thoughts.

Mind maps can help with that split considerable amount of information in small easily "visible" and easy to read (with a limited number of words) parts.

There are numerous mind-mapping applications (some of them free of charge) and they are available in many languages.

Learning technologies for inclusive teaching of foreign language to students with dyslexia

Language learning is an area in which the use of information and communication technologies (ICT) is growing steadily, to give learners access to information and to promote interaction and active communication. The rapid development of technology, however, does not only provide opportunities, but causes a number of challenges. In order to fully exploit the potential of ICT in language learning, it is necessary to line their implementation with pedagogical approaches that match the specific needs of each learner.

Assistive technologies have a serious potential as a supporting tool for students with dyslexia in mainstream education. Among the benefits are - raising academic achievement in reading, writing, spelling, maths; improving organisational skills, etc. In addition, students with dyslexia often achieve better results when they have the opportunity to use their abilities (strengths) to compensate their weaknesses.

According to Lewis [1] assistive technology serves two major purposes: to reinforce the strengths of the person, thereby counterbalancing the effects of the disability, offering an alternative way to perform the task. Thus, the use of technology enables learners to overcome totally or at some degree the difficulties they encounter in learning.

There are two principal approaches in discussing the technologies and their role in supporting learners with dyslexia in foreign language learning: classification by type of technology and classification by function. We prefer the second approach for several reasons; primarily because the use of a software depends on local conditions, resources and needs as well as the skills and creativity of teachers.

Therefore in this Guide we shall look to identify the key technologies, identify some of their uses, and encourage teachers to explore other teaching and learning methods that can make creative use of the technology.

Also, we need to remember that technology is a rapidly changing environment. And if something was recommended today, something better may appear tomorrow.

The role of the technologies in the learning process is to support the learning – not only for those having any kind of difficulties, but for everybody, as far as the technologies give wider access to information, gives wider opportunities for implementing different teaching approaches and learning strategies. So, the proper use of the technologies could not only simplify the process of learning but to considerably enrich it. Of course, how effective the technologies would be used as a supportive tool in learning depends on the teachers.

Here we should distinguish the difference between Learning technology and Assistive technology.

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[1] Lewis (1998:16-26)

Learning technology may be considered any tool that enters the learner's life, helps to learn the content, and then – after this tool is not necessary any more, it can be discarded.

Assistive technology is always needed to support the user so he/she can access the information, learn it and implement the knowledge in everyday life, and therefore the assistive tools are never discarded, though they may be changed/updated (this is especially valid when we talk about assistive software).

Here we will talk mainly about Assistive software that could be used to support foreign language teaching/learning when it comes to dyslexic students.

Assistive software refers to computer programs designed for specialised hardware used by people to overcome their difficulties. Examples include programs for screen magnification, screen reading, speech recognition, text-to-speech, touch screen displays, etc.

Three types of assistive software believed to be the most useful for learners with dyslexia (especially when it comes to foreign language learning) are described in this section.

Text-to-speech

Assuming that reading difficulties are one of the two symptoms that occur in most definitions of dyslexia (the other are difficulties in writing) anything that would help to cope with this task, gives undeniable advantage. Printed materials used in class - textbooks, worksheets, tests - can make the learning process more difficult for students who have reading difficulty. Using programs to convert written text into speech (text-to-speech) would facilitate the process.

Using Text-to-speech software as a reading supporting tool:

- improves word recognition;

- increases the ability to pay attention and remember information;

- allows learners to focus on comprehension instead of decoding words;

- increases the time learners can stay focused on reading assignments;

- helps students recognise and fix errors in their own writing.

Text-to-speech (TTS) programs allow users to see the text and listen to it at the same time. Simultaneously with the appearance of the text on the screen, it is read aloud by a screen reader. Some programs use computerised voices, others – a recorded real human voice. There are different types of text-to-speech software.

- **Screen readers -** The software reads text files, names of programmes and folders that the user points to on the screen. All iPads and iPhones, and many of other smartphones have text-to-speech features.

- **Speak Selection** is a kind of TTS software that lets the user specify which blocks of text he/she wants the programme to read aloud. The user can also use Highlight Text

so that each word is highlighted as it is spoken. This feature can help struggling readers to follow the lines along.

- **Text readers** convert written text into speech. The programme can read some types of files and web pages aloud. Text readers can highlight words as they're read, so the user can follow along. The combination of seeing and hearing the text at the same time helps comprehension as it activates both visual and auditory perceptions.

- **POET**: The programme was created by Benetech DIAGRAM Center. It allows the user to create image descriptions for DAISY (Digital Accessible Information System) books. After a description is uploaded, it's available for the next readers who download this DAISY file.

Text-to-speech tools can be used with different kinds of technology, from computers to mobile devices.

Some devices, such as the iPad, feature apps that read digital books. The user can choose whether to use the read-aloud function. Other controls that can help are:

- Font size and colour.

- Brightness and contrast.

- Type of voice (male, female or computerized).

- Rate of speech.

Case Study

Being a teacher of English for almost 10 years, I thought there was nothing that could surprise me anymore. This school year I'm teaching 6th grade (12 year old students). In one of the groups there is a boy whose very good spoken English distinguishes him from the others. He perfectly understands my questions, answers correctly in full sentences; his vocabulary is richer than could be expected at this stage. What came to my surprise, when I saw his results on the first written test – there was almost no correct answers; I hardly could find a correctly spelled word in his writing – I would have to guess what he wanted to write.

I asked the boy to stay after the lesson – I wanted to talk to him and to find the reason for his bad test results. He said that he learnt English mainly from watching the TV – from a very early age, he had been watching the children' channels in English; later on he got interested in the Discovery Channel and National Geographic. Conversation with the boy´s parents revealed that at primary school the boy had difficulties learning letters and how to read in his native tongue, dictations also were a big problem. The boy´s mother still helps him with his school work, reading long lessons for him, proof-reading his writings, etc.

All the information, I collected provoked me to look for some alternative way to help the boy. I came across an article about Text-to-speech software and how it could be used as a learning supportive tool. I suggested the boy and his parents to start using Text-to-speech to

support his reading in English – this way he could listen to the text read aloud by the software while following the lines with his eyes; he knew a lot of words, he just needed to make connection between the way these words looked and the way they "sounded". I also suggested that the use TTS software during the English tests in school should be allowed. This was allowed with positive results.

Speech-to-text

The definition given by Techopedia (www.techopedia.com) states: "Speech-to-text software is a type of software that effectively takes audio content and transcribes it into written words in a word processor or other display destination"[2].

In other words, if Text-to-speech programs allow the user to listen to what others have posted, Speech-to-text (STT) programs offer the ability to use your own voice to write directly on the computer. This way the user can avoid problems with handwriting and spelling (as far as the most devices have spellcheckers installed), and can focus on the structure and the content of the written work. The availability of STT programmes rapidly increases because smartphones and tablets.

Speech-to-text programs are extremely valuable supporting tool for every learner with dyslexia, especially when it comes to learning a foreign language. Writing in English (a language with complex orthography) can be a very serious problem for all students with dyslexia, and particularly for those whose native language is more or less phonetically (like Bulgarian and Italian, for example).

Apps like Dragon Dictation or Google's VoiceNote allow students to record their voices and turn their speech into text. This helps those who have difficulties with writing to easier complete their writing assignments.

Online dictionaries

Online dictionaries are quite popular and useful. There is no doubt that dictionaries are of great importance. They are easy to use by learners with dyslexia and can be an invaluable tool in studying a foreign language. If a student is not sure of the spelling of a word, he/she can use speech-to-text program that converts the spoken word into writing. Then the learner would find the word in the dictionary and using Text-to-speech program to hear the correct pronunciation and explanation of the meaning. One of the biggest advantages of online dictionaries is that they are constantly updated with new words or new meanings of words already known, as well as examples of their use.

For example Dictionaries24 gives the opportunity to use dictionaries in more than thirty languages for free.

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[2] Techopedia (Online, n.d.)

RoboBraille Service

The RoboBraille Service is based on the Internet and e-mail. It automatically converts documents in multiple alternative formats and is free for personal, individual, non-commercial use. This makes it an excellent tool for learners with dyslexia in learning a foreign language - both when they work in class or while preparing their homework or assignments. Particularly useful are the functions that convert text to mp3 files (thus allowing the lesson to be listened to as many times as necessary, every time - read with the same correct pronunciation) and converting the text into an e-book or DAISY book.

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