



Enhancing Digital Tools for an Inclusive Dyslexia Adult Education

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Content of the course

“Dyslexia in Adults for trainers – Learning to Achieve”

Prepared by Ilze Ivanova, Sarmite Tubele, Kristine Kampmane

University of Latvia, Faculty of Education,

Psychology and Art

Contributors:

Education in Progress,

European Knowledge Spot

Asociacia “Dyslexia –Bulgaria”

Danmar Computers Sp Zoo

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Introduction

Learning is a key word in the 21st century. Due to rapid and unexpected changes in society, economy and wide development of technologies everybody has to renew th knowledge and skills regardless of age and despite various challenges in learning and personal life.

At the World Summit for Social Development (Copenhagen 1995) an inclusive society was defined as a “society for all in which every individual, each with rights and responsibilities, has an active role to play”.

Inclusion in education creates a sense of belonging among co-learners leadin to a better climate in the group, developing motivation to learn , promoting the achievement of learning goals , influencing the effectiveness of learning, and fostering more innovations and the use of tecnologies. Inclusion in working place is of great importance for everyone – to feel well, safe, to participate in decision-making and work with interest. Team performance improves when employees feel more connected, solve various issues together and bring innovations into the working place.

There are different barriers, such as attitudes of society and peers, physical acessebility of education courses, readiness of teachers to work with diverse groups, overcoming prejudices, funding, regulatory framework. Understanding disabilities is one of the most serious barriers to education across the globe.

The number of adults with different learning problems is growing. Dyslexia is considered as one of these issues as it poses obstacles for adults in reading, writing, speaking, math, learning of foreign languages, as well as spatial orientation. According to statistics derived from substantial scientific research and estimates, in Europe, 15% of the population is dealing with dyslexia or some form of learning disorder. From that 15%, about 9%-12% are navigating through life in many situations that are not dyslexia-friendly.

Dyslexia is one of the specific disabilities about which educational professionals are beginning to sense an urgency to gain further knowledge and skills. In order to achieve this priority, there is a need to improve the competences of educators and other adult education staff.

The course “Dyslexia in Adults for trainers – Learning to Achieve” is developed based on the following deliverables of the project:

- Six National Reports on regulatory frameworks, policy interventions and best practice initiatives compiled in one transnational report containing critical reviews of Current approaches of Dyslexia In Adults
- EU-wide compilation report containing critical reviews of Current approaches to Dyslexia In Adults
- Report with evidenced based Indicators of Dyslexia In Adult learners
- Inventory Report of innovative pedagogical and tech approaches for adults with dyslexia
- Six National reports on current dyslexia specific training programmes and existing gaps in the system
- Common Dyslexia Signs and Remediation Strategies Handbook including recommendations on the best practices

The course will strengthen expertise and skills of adult educators and providers providing them with an innovative and digital-based approach to teach adults with dyslexia. This will be achieved through a video training package that includes ideas/tips on how to identify and handle dyslexia challenges. Additionally, the course will offer guidance how to use digital tools to transfer existing adult education curriculum. It will be accompanied by a manual and working sessions to facilitate effective

Topicality of the course

The course holds significant relevance in the context of the "European Year of Skills" from May 2023 to May 2024. This initiative aims to enhance the visibility and adoption of further education and training in adult life, providing a unique platform for stakeholders to engage in discussions, mutual learning, and the advancement of work in the field of skills development across Europe.

It is crucial to emphasise that the skills promoted during the European Year of Skills should be interpreted holistically. This includes skills for professional development, encompassing basic and social skills, as well as skills necessary for citizens in their daily lives, such as life and transversal skills and competences. Additionally, there is a focus on skills that contribute to strengthening sustainability, democracy, and social inclusion.

The course aligns well with the broader objectives of the European Year of Skills, offering an opportunity for the European adult learning and education (ALE) community to showcase its remarkable achievements in transforming people's lives and communities through the acquisition of essential skills.

- Research in ERASMUS+” Enhancing Digital tools for an Inclusive Dyslexia Adult Education” and other deliverables demonstrate a gap between the programmes for adults to be called inclusive, with adult educators lacking knowledge about dyslexia in adults
- The findings highlight that dyslexia in adulthood is a “forgotten topic ” for research and practical implementation to organise education programmes, individualised and personalised interventions, and accommodations to remove barriers faced by dyslexic students in accessing effective support.
- An Adult educator has to be prepared pedagogically, psychologically and technologically to work with diverse groups, however, findings demonstrate that there is a gap between teacher training programmes and the need for comprehensive dyslexia training programmes.

Course modules

1. Adult education specific features and the role of adult educator in the inclusion of diverse adults /adults with dyslexia/ in learning process, The essence and understanding of dyslexia in adults
2. The essence and understanding of dyslexia in adults
3. Evidence based indicators for assessment of Dyslexia in adults
4. Pedagogical approaches in working with dyslexic adults to promote inclusion for all in the learning process
5. Technological approaches working with dyslexic adults to provide support for overcoming learning obstacles for everyone.

The aim

Facilitate the development of inclusive adult education by promoting the understanding of adult educators' and providers and strengthening their skills and competences in using innovative and digital based approaches

Tasks

To develop expertise and skills of adult educators and providers supplying them with an innovative and digital-based approach

To use WP2 deliverables and activities in creating the course-“Dyslexia in Adults for trainers – Learning to Achieve” aiming to strengthen the supporting role of adult educators in guiding and advising learners with dyslexia and creating an inclusive adult education environment.

To acquire a new training course on adult dyslexia that adult education institutions can implement across all staff in their institutes.

The adult educators will know

- Specific features of adult education and their roles in the teaching and learning process
- The role of the adult educator in the inclusion of dyslexic adults
- The essence of dyslexia in adults

- Pedagogical and technical approaches in the work with dyslexic adults
- Good experiences from the partner countries in working with dyslexic adults

Adult educators will acquire the following skills

- Understanding developmental dyslexia in adults
- Using different pedagogical and technological approaches in working with developmental dyslexia in adults
- Creating support in guiding and advising learners with dyslexia thus promoting the development of inclusive adult education
- Creating of universal design for learning (UDL)

Adult educators will acquire the following competences

- Using the obtained knowledge in various situations when working with dyslexic adults
- Preparing and using universal design for learning to include everybody in the learning process
- Managing diversity in the learning process of adults

Target groups – adult educators, representatives of adult education institutions, policy makers on adult education

Module 1. Adult education specific features and the role of the adult educator in inclusion of diverse adults/adults with dyslexia in the learning process

The aim of the module:

To provide insight into the specific features of adult learning and the role of the adult educator in promoting inclusive adult education.

The tasks of the module:

To strengthen the knowledge of adult educators regarding the specific features of adult learning and inclusion in the learning process.

To foster the development of skills and competences necessary for scheduling to the learning process to ensure the inclusion of everybody in adult education.

To promote an understanding of the learning difficulties faced by adults and the establishment of a supportive system.

How do adults learn?

Adult Learning Theory

Adult learning theory, was proposed by Malcom Shepard Knowles in 1968. Researchers speak about andragogy as adult learning theory. Before that great attention was paid to the concept pedagogy, which focusses on the teaching of children. Knowles stated differences in the ways that adults learn as opposed to children.

Knowles (1913–1997) is widely regarded as “the father of adult learning theory.”

We will use this adult learning theory, Knowles 6 assumptions to characterize adult learning :

Self-concept: more mature and secure self-concept than children

Past learning experience: learned a lot already, including new knowledge building upon existing understanding.

Readiness to learn: Adults see the value in education and have the freedom to choose what they learn.

Driven by internal motivation: Adults are motivated internally; they are not solely driven by grades but learn for their own reasons and goals.

Need to know: Adults first need to understand what the purpose of the learning programme is and why they should learn the content

Practical reasons to learn: Adults learn for practical use such as, problem-solving, or entering a new field of work.

Let us discuss these assumptions in a more detailed way.

According to these assumptions adults are usually ready to learn, they have developed a certain self-concept and motivation to learn, they have a need to know why they need to learn, sometimes, adults take a course just because they need it now. They bring life ,professional and social experiences as well as certain learning experiences, they prefer problem-centered learning.

If adult educators understand and implement these characteristics of adult learning in their teaching they will assist adult learners in the learning process. Adult education or andragogy differs from pedagogy. We have to keep in mind that also students in higher education are adults and we have to treat them as such by using different approaches than those used in comprehensive secondary school.

How does this learning process differ as to children

School children have less or little life, learning or professional experience, they are not always internally motivated to learn, they are very often dependent on the teacher, and their instructions. The responsibility for personal activities and results is still being developed, as well as learning skills. They are not yet mature, not so self-determined and independent. The learning is curriculum-based.

What are the main differences to adult learning?

Adults have rich experiences which can impact their ways of learning. Personal or professional past experiences usually assist their progression in learning. Experience optimises the opportunity of adults to learn. They already have a certain way of learning, interacting, communicating. It can be self-directed or sometimes “chaotic”, because they have not acquired these skills in school or they have overcome great difficulties to have these skills.

The readiness of adults to learn can be affected by social and professional developments, referring to their social roles in certain communities such as friends, co-workers, personal needs and so on. Different social roles are seen as an opportunity for a 'teachable moment', it is a specific time for adults to enhance skills in order to cope with new challenges.

Motivation refers to the psychological conditions of adult learners thought, personal ideas or any related factors that affect people's actions and thoughts. In terms of adults' motivation in learning, adult learners are intrinsically motivated to learn, although not in all cases. Internal motivations, such as quality of life, job satisfaction, personal interests and wellbeing are very effective of adults. We cannot deny the importance of external factors such as having better jobs, higher salaries, widening duties at the workplace or simply an interest in the problem.

Adults usually are interested in the content of the course and the final result.

They want to know if it will satisfy their need for new knowledge, what skills and competences will they acquire, how will they be engaged in the learning process and what benefits they will gain. Adults are particularly interested in the final result of the learning, hence it is very important to state the aim, tasks, course results and the way of reaching these results.

Therefore, it is significant for adult educators who teach adult learners to explain and provide reasons for why they are learning the course. Offering explanations and emphasising the importance of learning the course before the learning process is essential in enhancing students' awareness and achieving results.

Adults are problem-centered, and there are reasons for this orientation. When adults bring an issue to their learning, they are motivated to learn it and solve it. Another reason why adults are problem-centered is that learning through problem is more engaging and applicable in real-life situation.

Based on the above mentioned Knowles assumptions about adult learners, we can discuss four principles put forward by the researcher - what educators should consider when teaching adults.

1. Since adults are self-directed, they should have a say in the content and process of their learning.

2. Because adults have so much experience to draw from, their learning should focus on adding to what they have already learned in the past.
3. Since adults are looking for practical learning, content should focus on issues related to their work or personal life.
4. Additionally, learning should be centered on solving problems instead of memorising content.

Later Knowles recognised that some points in his theory did not apply to all adults and some of the points he discussed could be applied to school children as well. This applies self directed learning, teacher centred and student centred approach. Self directed learning is of great importance in different settings in an online learning

Nowadays we are speaking of including everyone who wishes to learn, who needs to be re-qualified, to obtain new skills necessary for new duties at the workplace or simply is interested in learning. It means we have to implement inclusive teaching and learning. At the same time it is worth mentioning that the society is becoming more and more diverse in different aspects.

The number of adults with different learning problems is growing. Dyslexia is considered one of these problems because it poses obstacles for adults in reading, writing, speaking, math, and learning foreign languages, as well as spatial awareness.. According to statistics derived from substantial scientific research and estimates, in Europe, 15% of the population is dealing with dyslexia or some sort of learning disorder. From that 15%, about 9%-12% are navigating through life in a lot of non-dyslexia-friendly situations

Meanwhile, large numbers of people within that 15% are simultaneously suffering from other disorders as well. According to the European Dyslexia Association, which is a great place to receive information about dyslexia:

- 20-40% of the persons with dyslexia also have dyscalculia
- 20-55 % of persons with developmental language disorder are dyslexic.
- 10-20% of persons with dyslexia have an anxiety disorder

- 2-14% of persons with dyslexia are have depression
- 8-18% of persons with dyslexia have attention deficit and/or hyperactivity disorder

Research and accordingly prepared reports Current approaches of Dyslexia In Adults”, “Inventory Report of innovative pedagogical and tech approaches for adults with dyslexia”and “National reports on current dyslexia specific training programmes and existing gaps in the system” in the frame of ERASMUS + project “ Enhancing Digital Tools for an Inclusive Dyslexia Adult Education “ demonstrate that Inclusive Dyslexia Adult Education is not widely discussed in the participating countries. It could be considered as a hidden problem in adult learning. Adult educators themselves in research-based questions expressed the necessity of learning about this problem to be successful in teaching and supporting adults with dyslexia.

Adult educators must consider how adults learn in general and how dyslexic learners learn. Their skills are limited by preconceptions about spelling and poor phonological skills (Kolinsky & Tossonian, 2022). These are not the only features to consider. It is possible that clearly stated things can be misunderstood due to developmental dyslexia, and adult educators should also be aware of this in order to fully shape the learning process (Centanni et al., 2021).

Audio-support does not impact navigation strategies in children but does seem to impact navigation strategies in adult learners, leading to the use of more linear navigation patterns, reflecting less self-regulation (Knoop-van-Campen, Segers & Verhoeven, 2022). At the same time adults with dyslexia often develop unique skills and strengths as a result of their condition. While dyslexia can present challenges in reading, writing, and spelling, it is important to recognise that it is not solely a deficit; it can also be associated with certain cognitive and creative advantages. Some of the unique skills and strengths that adults with dyslexia may possess include:

1. Strong problem-solving skills: Many individuals with dyslexia excel in problem-solving and critical thinking. They often approach problems in innovative ways and can think outside the box.

2. Exceptional creativity: Dyslexic individuals may have heightened creativity and an ability to think in a visual and imaginative manner. This can be an asset in fields such as art, design, music, and other creative pursuits.
3. Strong spatial reasoning: Dyslexics often excel in visual-spatial tasks, such as understanding complex spatial relationships and three-dimensional thinking. This can be advantageous in fields like architecture and engineering.
4. Strong interpersonal skills: Dyslexic individuals may have enhanced social and interpersonal skills. They are often empathetic, good at reading non-verbal cues, and excel in understanding and connecting with others.
5. Resilience and determination: Many individuals with dyslexia develop a high level of determination and resilience in facing challenges. They learn to persevere and develop a strong work ethic.
6. Strong problem-solving skills: Dyslexic individuals often excel in problem-solving and critical thinking. They are creative thinkers who can approach problems in innovative ways.
7. Strong visual thinking: Dyslexics frequently think in pictures and images, which can be a powerful asset in fields like graphic design, photography, and other visual arts.
8. Entrepreneurial spirit: Some individuals with dyslexia are drawn to entrepreneurship and business ventures. Their ability to think creatively and see the big picture can be a significant advantage in this context.
9. Enhanced adaptability: Many adults with dyslexia have learned to adapt to different learning environments and develop diverse strategies for processing information. This adaptability can be a valuable skill in a rapidly changing world.
10. Empathy and emotional intelligence: Dyslexic individuals often have a heightened sense of empathy and emotional intelligence. They may be more attuned to the feelings and needs of others, which can be an asset in various professions, including counseling and healthcare.

It's important to note that not all individuals with dyslexia will have the same strengths and weaknesses, and these strengths and weaknesses can vary widely from person to person. While dyslexia may present challenges in some areas, it also offers unique skills and abilities that can be harnessed and celebrated. Recognizing and supporting these strengths is crucial for individuals with dyslexia to thrive in their personal and professional lives.

!! What are the main features of inclusive teaching and learning? Discuss this issue with your colleague sitting next to you in the course. Make a list of these features!

If the features you discussed for inclusive teaching and learning align with at least 80% of the below-mentioned ones, you can consider that you have successfully organised inclusive teaching and learning in your course. If they align less, you may need to reflect on how to progress towards achieving more inclusive teaching and learning practices.

What are the main features of inclusive teaching and learning?

- Common sense of belonging.
- Open and favourable learning environment.
- Active participation in the learning process
- Engagement of all students in learning activities
- combating biases together
- Students' motivation to learn
- Respecting everybody's personality in the learning process
- Empathy to each other

Inclusive educators help students learn about their problems, backgrounds and perspectives, and how they communicate with their peers and practice empathy. Educators have to set clear ground rules for all learners in the class, while keeping in mind the implementation of an individualised, personalised learning approach. The educator has to set clear behaviour standards for students, model respect for each other, provide a space for learners to practice empathy and promote it.

!! Now the turn to evaluate yourself! Are you an inclusive educator? Look at these

Characteristic features of inclusive educators:

- Ability to value diverse learners, learners with diverse needs
- Ability to identify the needs of learners
- Supporting each individual regarding his / her special needs
- Alert to the learners' problems and barriers to learning
- Ability to use different approaches to maintain or raise motivation to learn
- Knowledge, skills, and competences of teaching and learning techniques for students with diverse needs
- Knowledge and experience in the field you are teaching
- Interest in personal further education in order to continuously improve teaching and learning processes, to develop practical skills to work with adults
- Communicating and collaborating with other professionals
- Patient in solving problems and supporting adults in diverse situations
- Skills to use different modern technologies, to stay up-to-date in teaching and learning process

If you possess at least 80% of these features, or if you can add a few more that you personally have, you are an inclusive educator with knowledge about learners in your specific field. You have the skills and competence to work with diverse adults, but it is never too late to learn more ideas and specific approaches to support adults with different challenges

What is the view of experienced adult educator about the specific features how to involve adults with dyslexia in active learning?

!! The interview with the adult educator

Interviewer: Good day, and thank you for joining us today. We have with us an adult educator who works with adults with dyslexia. Could you please introduce yourself and tell us about your background and experience in adult education?

Adult Educator: Thank you for inviting me to share experiences. My name is Anna, and I have been working in adult education for over a decade. I hold a master's degree in adult education and

have always been passionate about helping adults overcome their learning challenges, especially dyslexia. I've worked in various settings, including traditional classrooms and online environments, to support adults with dyslexia in their learning journeys.

Interviewer: That's impressive, Anna. Could you explain what dyslexia is and why it's essential to address this issue in the adult education setting?

Adult Educator: Of course. Dyslexia is a neurodevelopmental condition that affects an individual's ability to read, write, and spell accurately and fluently. It's essential to address dyslexia in adult education because it often goes undiagnosed or untreated in childhood, and many adults struggle with reading and writing throughout their lives. This can significantly impact their confidence, self-esteem, and educational or professional opportunities. As educators, it's our responsibility to create an inclusive learning environment and provide support for adults with dyslexia.

Interviewer: Absolutely. How do you adapt your teaching methods to accommodate adults with dyslexia in a mainstream classroom?

Adult Educator: Adapting my teaching methods is crucial to ensure that adults with dyslexia can access and engage with the content effectively. Here are some strategies I commonly use:

1. **Multisensory Learning:** I incorporate visual, auditory, and kinesthetic elements into my lessons. This can include using visual aids, interactive activities, and even incorporating technology to appeal to different learning styles.
2. **Structured and Clear Materials:** I provide clear, well-structured materials and instructions. This includes using bullet points, headings, and highlighting key information to make it easier to follow.
3. **Individualized Support:** I acknowledge that dyslexia affects people differently, so I often offer one-on-one support to address specific needs. This may involve additional tutoring, personalized reading materials, or assistive technology.
4. **Alternative Assessments:** I allow for alternative assessment methods, such as oral presentations or projects, to accommodate different strengths and abilities. This reduces the sole reliance on written tests or assignments.
5. **Extended Time:** Providing extra time for reading and writing tasks can be beneficial, as it eases the pressure on adults with dyslexia and allows them to produce higher quality work.

6. **Encouragement and Positive Feedback:** I create a supportive and positive learning environment to boost the confidence of my students. Offering regular encouragement and constructive feedback is crucial in building their self-esteem.

Interviewer: Those are excellent strategies, Anna. How do you promote awareness and understanding of dyslexia among your mainstream adult learners?

Adult Educator: Raising awareness and fostering understanding among the entire class is essential for creating an inclusive environment. I do this through the following methods:

1. **Open Discussions:** I initiate open and respectful discussions about dyslexia in the classroom. I encourage students to share their experiences and insights.
2. **Educational Workshops:** I sometimes organize workshops or guest speaker sessions about dyslexia, its challenges, and strategies for support. This can be enlightening for both students and instructors.
3. **Inclusive Language:** I promote the use of inclusive and non-stigmatizing language when discussing dyslexia. It helps reduce any negative stereotypes or misconceptions.
4. **Peer Support:** Encouraging students to support their peers with dyslexia can foster empathy and camaraderie. Group projects or study groups can be an excellent way to facilitate this.

Interviewer: It's wonderful to see the holistic approach you take in your teaching. **Finally, what advice would you give to educators who are just starting to work with adults with dyslexia in mainstream classes?**

Adult Educator: For educators starting in this field, my advice would be:

1. **Educate Yourself:** Take the time to learn about dyslexia, its characteristics, and available teaching strategies. Knowledge is your best ally.
2. **Flexibility is Key:** Be flexible and willing to adapt your teaching methods to suit the individual needs of your students.
3. **Patience and Empathy:** Patience and empathy are essential when working with adults with dyslexia. Understand that progress may be slow, gradual, but with your support, they can achieve their goals.

4. **Collaborate:** Work closely with specialists and support services to ensure that the students have access to the resources they need.
5. **Celebrate Achievements:** Celebrate even small achievements. Building confidence and self-esteem is a crucial part of the journey.
6. **Continual Learning:** Dyslexia and education are ever-evolving fields. Stay up to date with the latest research and teaching techniques to provide the best support.

Interviewer: Thank you, Anna, for sharing your insights and expertise. It's clear that your work as an adult educator is making a significant impact on the lives of adults with dyslexia.

Adult Educator: You're welcome, and thank you for shedding light on the importance of this topic. It's my passion to help adults with dyslexia succeed in their educational pursuits, and I hope this conversation inspires more educators to embrace inclusive teaching practices.

Now it is time to do the quiz!

https://quizizz.com/admin/quiz/653ce920510d994f12753ffa?source=quiz_share

(includes questions about the whole chapter)

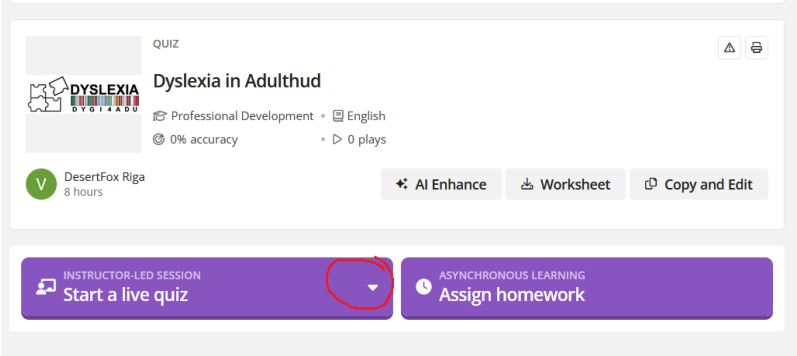
You can do it individually or guided by your tutor.

Here are some tips on how to succeed! (It has to be included in the tips – how to work with the materials , but it is very useful here as well to see how to act on once)

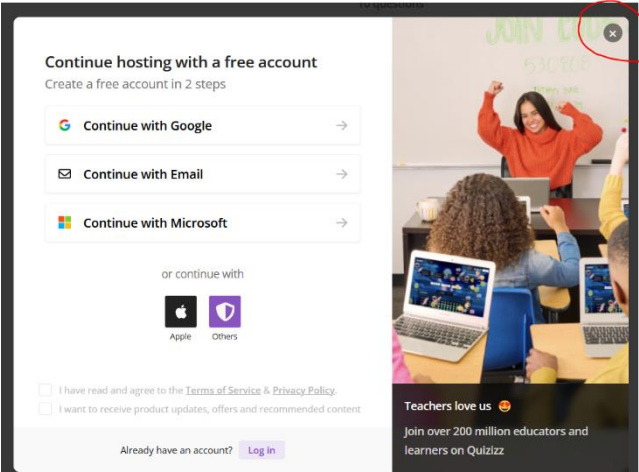
How to start a quiz?

1. Click on the link provided and open it in the PC browser
2. When a quiz site is opened, choose “Start a live quiz” in a classic mode:

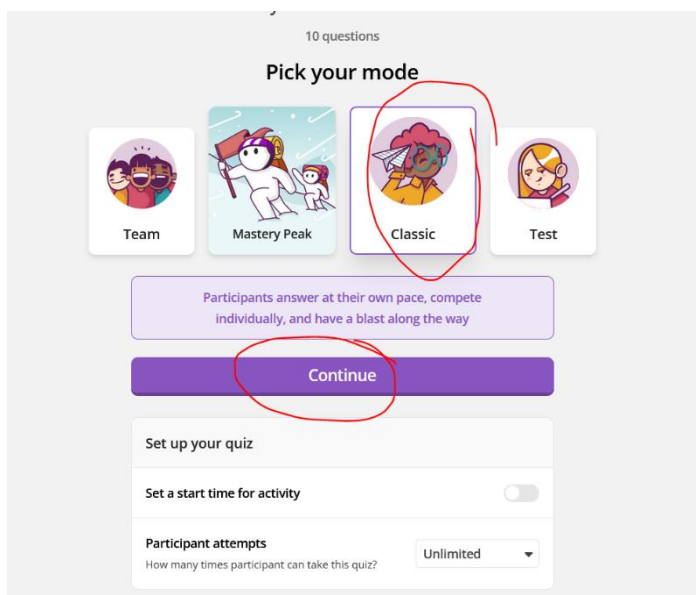
(screen on your PC)



3. Close the login windows:
(screen on your PC)

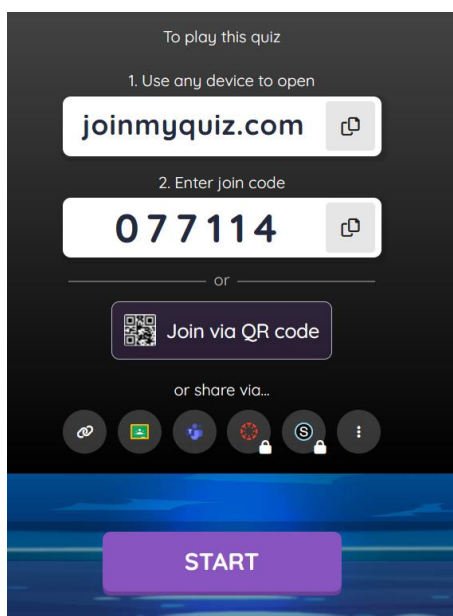


4. Click on the continue button:
(screen on your PC)



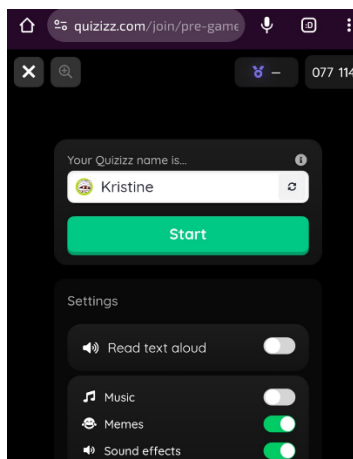
- Join the quiz from your mobile device or other computer by typing the address and the code:

(screen on your PC)



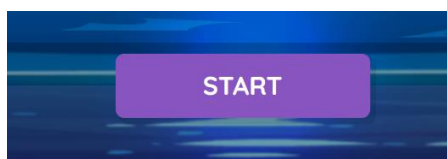
- On your phone screen choose your name

(screen on your mobile device)



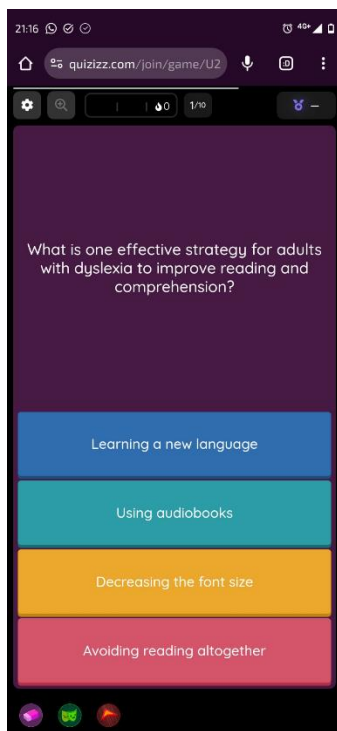
7. When everyone has joined, click on the start button and start the quiz:

(screen on your PC)



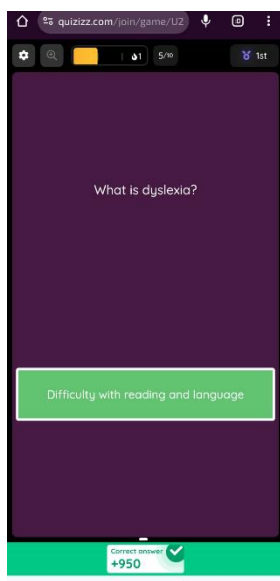
8. Play the quizz in your mobile device by tapping on the coloured rectangle you think the correct answer is:

(screen on your mobilde device)



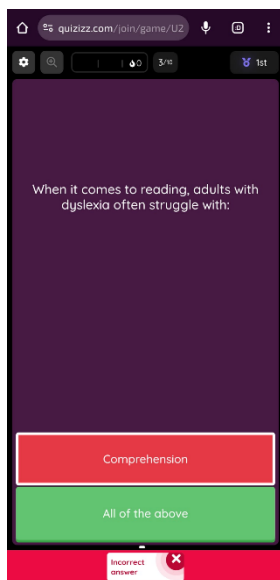
9. Every correct answer will be marked green:

(screen on your mobile device)

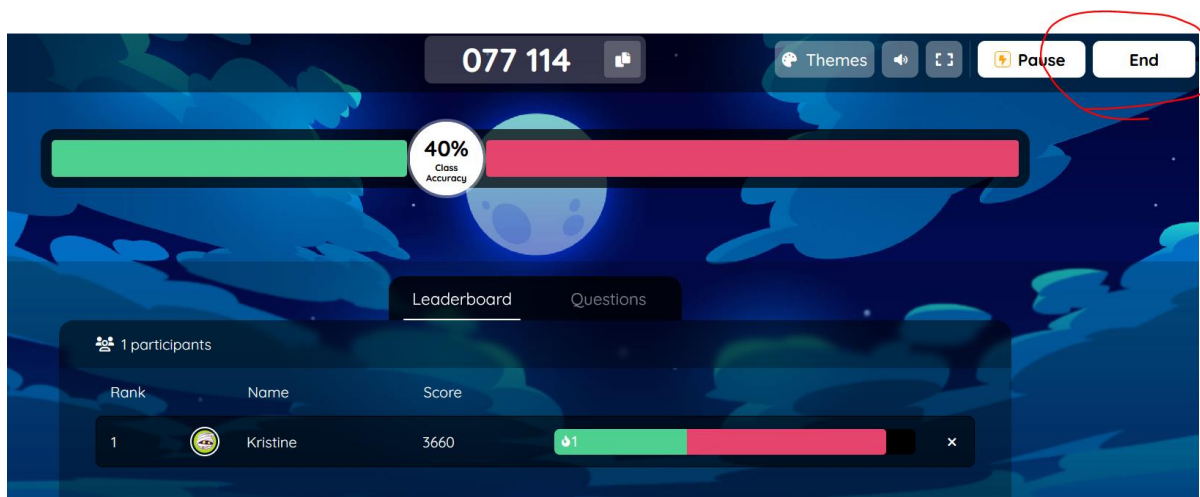


10. Every incorrect answer will be marked red:

(screen on your mobile device)



- From your PC screen you can follow players and end the quiz at any time by pressing on “End”
(screen on your PC)



It is of utmost importance to know how do adults and adults with learning difficulties study however it is very important to understand what dyslexia is, how to recognise it and understand it, in the next module we will discuss these issues.

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Module 2. The essence and understanding of dyslexia in adults

The aim of the module:

- Provide insight into dyslexia in adults by characterising difficulties and strengths,
- To state the approaches from partner countries

The tasks of the module:

- To strengthen the knowledge of adult educators on specific features of adults with dyslexia.
- To promote the development of skills and competences of adult educators to understand and recognise signs of dyslexia in adults to forecast the necessary support.

What it is DYSLEXIA?

From history - in 1896 Doctor Morgan (Morgan, 1896) defined it as word blindness later called dyslexia.- check this fact Ilze as I read of atleast 2 other names that are claimed to be responsible for this term.

There are many definitions, nevertheless we will present some of them.

Dyslexia is one of the specific disabilities about which educational professionals have begun to feel the urgency to acquire further knowledge and skills. Dyslexia is the term used to describe a disorder that is mostly characterised by severe learning difficulties in reading, spelling and writing skills. By origin, dyslexia is a neurobiological condition, affected by genetic factors and environmental factors as well as difficulties in phonological processing.

Although dyslexia is not classified as a disease in Europe ICD-10 (International Classification of Diseases) is used where it is defined as specific reading disability also called developmental dyslexia.

Dyslexia and Developmental Dyslexia

Dyslexia, which is an acquired problem due to brain injury, trauma, stroke or other conditions is treated by speech and language therapists and neurologists

Developmental Dyslexia – when child cannot acquire reading skills at the same rate and level as his/her peers. The child learning to read, gaining strategies, and learning how to cope with reading problems. As they grow up, they become readers, nevertheless their reading skills may not be the best and reading may not be their favourite activity. .

Dyslexia in Adults

Initially, the definitions were more for statement, finding, than informing. So, for example, in 1968, the World Federation of Neurology agreed to the following definition of dyslexia: dyslexia is a disorder that manifests itself in difficulties in learning to read, despite traditional reading teaching, adequate intelligence and sociocultural opportunities. It depends on the underlying cognitive difficulties, which are often constitutional in origin (Høien, Lundberg, 2000, 7).

Dyslexia is a specific and persistent learning disability affecting the acquisition and development of the written language code (reading and spelling) and causing a significant handicap to academic achievement and/or the activities of daily life; it is considered where reading performance is poorer than one standard deviation below the expected level for the given age and intelligence (Habib & Geraud, 2013).

Certain perceptual deficits may arise during adolescence and become more severe in adulthood. Some adults may become better readers than others. Learning a script in increasingly later ages seems related to worse outcomes (Abadzi, 2019).

The Problem we can be described as somewhat hidden – adults don't need to learn new scripts, adult literacy failures are often attributed to social reasons. Language competence problems occur beside the visuospatial problems and together this leads to reading errors.

Norwegian and Swedish researchers created their own definition, which is descriptive and broad: dyslexia is a disorder in certain language functions that are important when using the alphabetic principle to decode language. The disorder first manifests as difficulty in learning automatic word decoding during reading. The disorder also manifests itself in poor writing skills. Dyslexic disorders usually run in families for several generations and may be thought to be genetic in nature. Another characteristic feature of dyslexia is that the disorder is persistent, stable. Even though reading skills may eventually reach an acceptable level of performance, poor writing skills often persist. A closer examination of phonological skills shows that poor performance in this area persists even in adults. In simpler terms, dyslexia is defined as an independent disorder in the coding of written language, the cause of which is a deficit in the phonological system (Svensson I., Lundberg & Jacobson 2003).

Adlof & Hogan, (2018).has pointed out the necessity for the development of broader language skills in persons with dyslexia not only phonological skills

Reid has grouped the definitions of dyslexia into several groups (*Reid, 2003*). There are so-called descriptive definitions. For example, dyslexia is a combination of abilities and difficulties that affect the learning process in one or more areas - writing, spelling, reading. Weaknesses can be found in processing speed, short-term memory, sequencing, auditory and/or visual perception, oral speech and motor skills. It refers to the formation and use of written language (alphabet, numbers, music) (*Reid, 2003*).

There are also definitions based on discrepancy. They are added to a labelled definition. Based on the mismatch between ability and performance, although included in some laws and policy documents, they are criticized. This is especially true of IQ and its tests, the diagnosis of which is essential in dyslexia. There is even evidence that there is no qualitative difference in reading errors between high and low IQ children, meaning that IQ cannot be used as a measure of ability for this purpose. Sometimes even poor readers show good results on intelligence tests. Listening comprehension may be a more useful measure of ability. The definition of inconsistency is also used in education (*Snowling, 2004*)

One of the definitions adopted in Europe - dyslexia is a specific developmental disorder that manifests itself in difficulties in learning to read despite a normal learning process, normal intelligence and good socio-cultural conditions (Pauc, 2006).

Dyslexia is a processing difference that can occur in people of all ages; it is often characterized by difficulties in learning to read and write, it can also affect other cognitive spheres – memory, data processing speed, time management, coordination and the direction (space) aspect. There may be visual and phonological difficulties and there is usually a discrepancy between performance in different learning areas. Importantly, individual differences and learning styles are identified before they affect learning outcomes and assessment. It is also important to consider the learning and work context as the nature of the difficulties associated with dyslexia and more pronounced in some learning situations (Reid, 2004).

Working and operational definitions, for example, dyslexia is evident when accurate and fluent word reading and/or spelling develops incompletely or with great difficulty.

In 1994, the Orton Dyslexia Society, along with the National Center for Learning Disabilities and the National Institute of Child Health and Human Development, created a research-based definition that takes many factors into account.

Dyslexia is one of several groups of learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulty in decoding single words, usually also showing deficient phonological processing. These difficulties in decoding single words are usually unexpected for age and other cognitive and academic abilities: they are not the result of a general developmental disorder or sensory impairment. Dyslexia manifests itself in different difficulties in different types of language, often including additional problems in reading, clearly visible problems in learning to write and spell. (Orton Dyslexia Society Research Committee, 1994).

A clear position is expressed by the European Dyslexia Association, which states that dyslexia is a medical diagnosis. Dyslexia has neurological causes, changes in the brain, but correction is a pedagogical problem. Elsewhere, in other parts of the world, reading disorders are dealt with by speech therapists and psychologists.

The British Dyslexia Association has adopted one of the definitions which states that "Dyslexia is a complex neurological condition which is constitutional in origin. Symptoms can affect multiple areas of learning and function and can be described as specific difficulties in reading, writing and spelling. One or more of these areas may be affected. Calculation, note learning skills (in music), motor functions, organizational skills may be affected. As the English dyslexia researcher Philomena Ott notes, this directly applies to the acquisition of written language, but oral speech may also be underdeveloped" (Ott, 1997, 4).

!! Task Write in the chat of the learning platform - which definition seems to be more complete, involving different aspects of dyslexia !

The concept of dyslexia in adults has been a subject of research and discussion from various perspectives. Dyslexia is a complex condition that affects an individual's ability to read, write, and spell, and its manifestation in adults can vary widely. Different viewpoints and conclusions about dyslexia in adults have been drawn from various fields, including psychology, education, neuroscience, and clinical practice. Here are some of the main conclusions and viewpoints on the concept of dyslexia in adults from different angles:

1. Psychological Perspective:

- Dyslexia is considered a lifelong condition, and adults with dyslexia often continue to experience reading and writing difficulties.
- There is a wide range of dyslexic profiles, with variations in reading skills, spelling, and underlying cognitive processes.
- Dyslexia in adults can co-occur with other cognitive or psychological challenges, such as attention deficit hyperactivity disorder (ADHD) or working memory deficits.

2. Educational Perspective:

- Dyslexia assessment and intervention should continue into adulthood to support individuals in developing effective reading and writing skills.
- Adults with dyslexia may benefit from alternative methods of learning, assistive technologies, and accommodations in the workplace and educational settings.

3. Neuroscientific Perspective:

- Research has shown that dyslexia is associated with differences in brain structure and function, particularly in areas related to reading and language processing.
- Neuroimaging studies have identified brain-based markers of dyslexia in adults, such as atypical activation patterns in the reading network.

4. Clinical Perspective:

- Diagnosis of dyslexia in adults often involves comprehensive assessments that consider reading performance, cognitive abilities, and medical history.
- Dyslexia interventions for adults may include structured literacy programs, phonics instruction, and strategies to improve reading comprehension and fluency.

5. Social and Emotional Perspective:

- Adults with dyslexia can face various social and emotional challenges, including low self-esteem, anxiety, and frustration due to difficulties in reading and writing.
- Supportive environments, understanding employers, and access to accommodations can significantly improve the quality of life for adults with dyslexia.

6. Legal and Policy Perspective:

- In many countries, legal protections and accommodations are in place to ensure that adults with dyslexia have equal access to education and employment opportunities.
- Legislation, such as the Americans with Disabilities Act (ADA) in the United States, provides protection against discrimination and mandates reasonable accommodations for individuals with dyslexia in the workplace.

7. Cultural and Societal Perspective:

- Awareness and understanding of dyslexia in adults vary across different cultures and societies.

- Stigma associated with dyslexia may impact how individuals seek help and disclose their condition in different social contexts.

In summary, the concept of dyslexia in adults is multidimensional and is understood from various angles, including psychology, education, neuroscience, clinical practice, and broader social perspectives. Understanding dyslexia in adults requires a comprehensive approach that considers its cognitive, emotional, educational, and societal dimensions. The conclusions drawn may vary depending on the specific viewpoint and context from which they are considered.

Mario Engel, working as Chairman of the German Dyslexia Association , writes

“Dyslexia is just a different way of seeing the world, a different way of processing information, a different way of learning and a different way of coming up with great ideas. As an individual with dyslexia, I personally find value in my unique perspective and way of processing information. Dyslexia can be a source of strength and creativity, and I am proud of the way my brain functions.”

Watch the video- Famous people with dyslexia ! It will enrich your perception of understanding these people . <https://www.youtube.com/watch?v=tOTGNZZbzb8>

Adults often are able to mask their difficulties, they use a variety of different effective strategies to compensate for their problems. They remember struggling in childhood with various barriers. They have strengths and abilities to be creative in different fields, and to be very sensitive and emotional in various situations .They evaluate support and work hard themselves. Some of them are not afraid to ask for support from friends.

Adults with dyslexia have often lived with a lifetime of pain and frustration that impacts every area of their life—academic, vocational, and social/emotional. For some, this began as early as they can remember: struggling to learn letters, difficulty with reading even beginner books, and writing that was torturous. For others, the problems began as they got older and couldn’t keep up with classmates.

Dyslexia is a neurological disorder involving the parts of the brain that process language. Dyslexia is often inherited and will remain with an individual throughout their lifetime.

!! Interview with dyslexic adult - to understand better the signs of dyslexia and importance of support in time.

Interviewer: Thank you for agreeing to speak with us today. Can you please introduce yourself and tell us a bit about your background?

Dyslexic Adult: Of course, thank you for having me. My name is Hary, and I'm in my mid-thirties. I work in marketing and have always been passionate about art and design. I was diagnosed with dyslexia when I was in elementary school.

Interviewer: Can you share your experience of being diagnosed with dyslexia and how it has shaped your life?

Hary: My diagnosis came when I was around seven years old. I remember struggling with reading and writing in school, and my teachers noticed that I was falling behind. I was lucky that my parents were very supportive and proactive. They had me assessed, and I received a formal diagnosis. At first, it was a bit challenging to understand what it meant, but it was a relief to have an explanation for my struggles.

Interviewer: How did your diagnosis change the way you approached your education?

Hary: It changed everything. Once I was diagnosed, I started receiving extra support and accommodations in school. I had specialized tutoring for reading and writing, and extra time for tests. These accommodations made a huge difference in helping me keep up with my peers. It was a boost to my self-esteem, too, because it wasn't about intelligence; it was about a different way of processing information.

Interviewer: Can you describe some of the daily challenges you face due to dyslexia, even as an adult?

Hary: Dyslexia is a lifelong condition, so I still face challenges today. Reading can still be a struggle, especially with complex texts, and I often misread words or skip lines. Writing is also difficult.

Spelling and grammar errors are common, but I've learned to rely on tools like spell-check and grammar-check to help me.

Interviewer: How has dyslexia influenced your career in marketing and your passion for art and design?

Hary: Surprisingly, it has had a positive impact. Dyslexia often encourages creative thinking and problem-solving. In marketing, I think outside the box and come up with unique ideas. When it comes to design, I'm very visual, so I can create compelling graphics and layouts. I've learned to adapt my work processes to my strengths, and it has been beneficial for my career.

Interviewer: Can you share any strategies or tools that you use to overcome challenges related to dyslexia?

Hary: Absolutely. I've developed a few strategies that have helped me throughout my life. First, I use text-to-speech software to listen to written content, which makes it easier for me to understand. I also rely heavily on organization tools, like calendars and to-do lists, to stay on top of my tasks and deadlines. Finally, I'm not afraid to ask for help or delegate tasks that are particularly challenging for me.

Interviewer: Do you have any advice for others with dyslexia or for parents of children with dyslexia?

Hary: For individuals with dyslexia, my advice would be not to be discouraged. Dyslexia doesn't define your intelligence or potential. Find your strengths and work with them. Seek out the support and accommodations you need, and don't be afraid to ask for help. And for parents, be patient, understanding, and supportive. Early intervention and encouragement can make a world of difference for children with dyslexia.

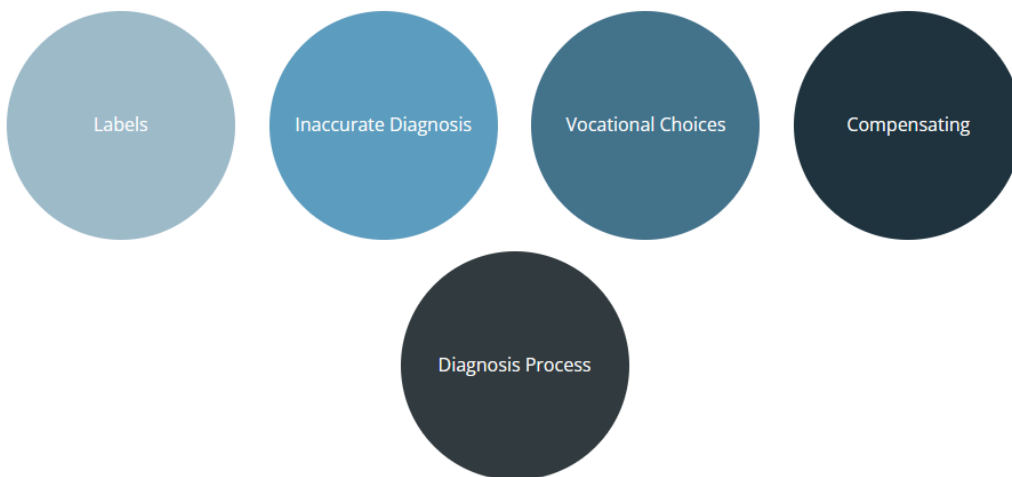
Interviewer: Thank you, Hary, for sharing your experiences and insights on living with dyslexia. It's been a pleasure talking with you today.

Hary: You're welcome. I hope our conversation can help raise awareness about dyslexia and encourage others facing similar challenges

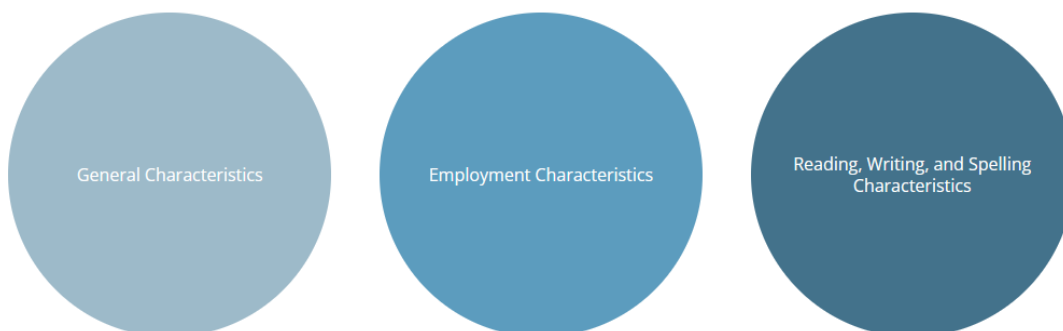
!! Use the link

<https://www.readinghorizons.com/dyslexia/what-is-dyslexia/dyslexia-in-adults>

read the article paying special attention to the **Characteristics of Dyslexia in Adults** , doing the interactive task you will learn more about adults with dyslexia. From the link you will see the following circles, click on them .



By exploring further and clicking on three additional circles, you will discover characteristics presented in a very concrete form.



Write in the chat of the learning platform, describe how useful these interactive forms were.

What are the approaches to defining and dealing the concept in project partner countries?

In Bulgaria, the terms “specific learning difficulties” and “specific learning disabilities” are used without special distinction in the Bulgarian legal framework.

In Greece, dyslexia has been recognised as a specific developmental disorder.

In Ireland, dyslexia has been defined as a specific learning difficulty affecting the acquisition of fluent and accurate reading skills and spelling skills.

The Italian constitution recognises "dyslexia, dysgraphia, dysorthographia and dyscalculia as learning disabilities that manifest themselves in the presence of adequate cognitive capacities, in the absence of neurological pathologies and sensory deficits, but may represent a significant limitation in some activities of daily life".

Latvia concepts defining that “dyslexia is a specific and persistent learning disability affecting the acquisition and development of the written language code (reading and spelling) and causing significant handicap to academic achievement and/or the activities of daily life.

In Poland, the most commonly used definition of developmental dyslexia is the one standardised by Professor Marta Bogdanowicz, the pioneer of research into this issue.

Thus, dyslexia are "a syndrome of disorders of higher mental functions which manifest themselves in the form of specific learning difficulties in reading and writing.

There are many suggestions regarding which signs are most relevant. One of such resources is found on the page of Touch-type. Read & Spell.¹ There are thirteen signs mentioned.

¹ <https://www.readandspell.com/dyslexia-in-adults>

Non-linear thinking

Individuals with dyslexia tend to bring ideas together in a unique manner

Inconsistent and troublesome spelling

They can spell a word correctly one day, but not the next. They may also misspell the word in a different way each time.

Creativity

The out-of-the-box and non-linear thinking styles of dyslexic adults can help them develop a creative flair that others can't help but pay attention to. They may excel in the arts, music, or even be talented authors and storytellers!

Reading out loud is problematic

Dyslexia affects the way individuals break words down into their component sounds. This is why spelling is tricky, but it is also why decoding or sounding out words in reading can be a struggle.

Messy handwriting

Not everyone with dyslexia will have poor handwriting, but many individuals find it difficult to write neatly because they are distracted by problems associated with spelling. There's also a tendency for dyspraxia and dyslexia to co-present. Dyspraxia is a motor-skills difficulty that can make handwriting painful, which in turn results in messy handwriting.

Intelligence

There is a widely held misconception that individuals who struggle with literacy skills are less intelligent than their peers. In reality, dyslexia and intelligence are not linked and many dyslexic children and adults actually test quite high on non-verbal measures of cognitive ability – some are even in gifted programs!

Difficulty with serif fonts

Serifs are small decorative bits that can distract from basic letter shapes and make for a busy visual. Adults who have dyslexia may struggle to read text when it is printed in a font with lots of flourishes.

Visual learner

Many adults with dyslexia are visual learners. This means they are more likely to succeed when material is presented with the addition of visuals, such as slides or illustrative charts. It's also why learning in a multi-sensory way can be so effective.

Reading takes longer

A dyslexic reader may find they lose their place easily or are always rereading the same bit of text in order to fully process its meaning.

An easy way around this is to listen to audiobooks, or to try running a ruler down the page to keep your place and add a kinesthetic element to the task.

Dedication and never-give-up attitude

Many adults who have struggled to acquire early literacy skills go on to achieve great things in higher education and business. Nonetheless, they may initially have had to work harder than their peers to overcome the reading and spelling problems posed by their dyslexia. This extra work can build determination and inner-strength, qualities that help people with dyslexia go far, no matter what they choose to do.

Foreign languages are a struggle

The same decoding problems that can come up in English have also been shown to affect individuals who pursue second language study. However, there is a caveat: some languages may be easier for people with dyslexia than others. That's because a more 1:1 phoneme grapheme mapping system and less irregular approach to spelling can make acquiring fluency in the written language easier.

Mismatch between ability and confidence

Individuals with undiagnosed dyslexia may lack confidence because of past educational failures. For adults with mild dyslexia who are generally able to manage their literacy problems through self-developed coping strategies, confidence can still be an issue.

Low self-esteem

When dyslexia goes undiagnosed, it can cause an individual to believe they are somehow lacking and less intelligent than their peers. Over time, this may not only undermine their confidence, but cause them to think poorly of themselves and their own abilities.

!! Now you can test yourself – in terms of word decoding , which is a significant issue for a dyslexic person

Examples from different countries – one sentence per country

LV - Saksanā ar kdāas agnļu uvinersiātets pjuētīmu nav savgīri kādā sbecīā ir bturi vrādā, veigīni savgīri, lai promias un pdējias butri būtu svāas vteiās.

!! Can you read it? If yes – you don't have dyslexia!

Adults and university students can only be provided with support if their disability is identified (Casale, 2009). According to Casale's research formal assessment of dyslexia in United Kingdom takes around three hours, including a battery of cognitive tests and an interview to discuss the individual's educational and personal history to identify any everyday difficulties, and to reveal any complicating factors (Casale, 2009).

We need to understand the difficulties and obstacles to learning; weakness and especially strengths must be evaluated; if it is adult-learning we have to find the ways and measures of support; it will be a key for better self-understanding (Smythe & Siegel, n.d.).

Dyslexia can have an impact on many aspects of everyday life. We look at common issues such as: studying in further or higher education, learning to drive, looking for work and the support which should be available in the workplace.

Understanding the signs and indicators of dyslexia in adults enables us to find tailored coping mechanisms for each individual.

The Next module is devoted to the assessment and evidence-based indicators.

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Module 3. Evidence based indicators for assessment of Dyslexia in adults

The aim of the module is to obtain knowledge about the indicators of dyslexia and the assessment of dyslexia as a problem in adulthood.

The tasks of the module

To acquaint adult educators with specific indicators of dyslexia in order to recognise learners within the learning process.

To promote the development of skills and competences of adult educators to be able to carry out assessment of dyslexia.

Assessment /evaluation is a process of selecting, collecting, analysing, interpreting, and using information to define the problem and the current state. In our case assessment involves the gathering of information to identify signs contributing to adult's difficulties with a number of activities.

Before we start the assessment process it is important to know the main indicators characterising these difficulties. Most dyslexics will exhibit some of the traits and behaviours. These characteristics can vary from day-to-day or minute-to-minute.

Dyslexia tends to run in families. If the youngest child has been diagnosed with dyslexia, it is worth checking whether other siblings and other family members have experienced similar difficulties. The most consistent thing about dyslexics is their inconsistency.

Assessing dyslexia in adults typically involves a comprehensive evaluation conducted by a trained professional, such as a clinical psychologist, neuropsychologist, or a specialist in learning disabilities.

Assessing dyslexia in adults involves a comprehensive evaluation that typically includes a combination of indicators, assessments, and tests. Dyslexia is a specific learning disability that primarily affects reading and writing skills, and it can manifest differently in adults than in children. Dyslexia is a lifelong condition that can persist into adulthood, and the assessment process includes obtaining personal and family history. Information about the individual's personal and family history of reading and language difficulties can provide valuable insights. Adults themselves can provide the information about their personal problems in reading and writing. Observing the individual's reading and writing skills in real-life situations, such as work or educational settings, can offer valuable insights into their functional difficulties. It's important to rule out other potential causes of reading difficulties. Evaluating an individual's oral language skills, including vocabulary, grammar, and expressive/receptive language abilities, can provide important information about language development.

Assessing an individual's ability to comprehend written text is crucial. This may include assessing their ability to recall and understand information from texts.

A clinical psychologist or neuropsychologist may assess an individual's emotional and psychological well-being, as living with dyslexia can lead to self-esteem and emotional challenges.

After assessment, the professional should provide a detailed report with recommendations for accommodations and support.

It's crucial to remember that the assessment process should be conducted by trained and qualified professionals who have expertise in diagnosing dyslexia in adults. The goal is not just to identify the condition but also to provide support and accommodations to help individuals overcome their reading difficulties and succeed in their personal and professional lives.

While there isn't a strict classification of "levels" of dyslexia, it can be described in terms of its varying degrees of impact and its specific manifestations in adults. The severity of dyslexia can be influenced by factors such as early intervention, educational support, and individual coping strategies. Here are some general descriptions of different manifestations and impacts of dyslexia in adults:

1. Mild Dyslexia:

- Individuals with mild dyslexia may have difficulty with specific reading and writing tasks.
 - They may read slowly and have trouble with complex words or unfamiliar text.
 - Spelling and writing can be challenging, with frequent errors.
 - With appropriate support and accommodations, individuals with mild dyslexia can often develop effective strategies for coping with their challenges and may excel in other areas.
2. Moderate Dyslexia:
- Those with moderate dyslexia may struggle more with reading, writing, and spelling.
 - Reading comprehension can be a significant challenge, and they may avoid reading whenever possible.
 - Writing may be marked by frequent spelling and grammatical errors, and it may be a slow and effortful process.
 - With appropriate intervention and assistive technologies, individuals with moderate dyslexia can make significant improvements in their reading and writing skills.
3. Severe Dyslexia:
- Severe dyslexia can significantly impact an individual's daily life, making tasks like reading and writing extremely challenging.
 - Reading may be laborious, with difficulty recognizing even basic words.
 - Writing and spelling are often highly error-prone, making written communication difficult.
 - Without proper support and intervention, severe dyslexia can hinder educational and professional opportunities, but with the right resources and strategies, individuals can still succeed in most areas.

It's essential to note that dyslexia does not affect intelligence; individuals with dyslexia can have average or above-average intelligence. Furthermore, the impact of dyslexia can change over time with appropriate support, interventions, and strategies. Many individuals with dyslexia develop compensatory skills and coping mechanisms to overcome their challenges, allowing them to succeed in their chosen fields and personal endeavors.

For adults with dyslexia, diagnosis and tailored interventions are crucial to help them reach their full potential and overcome the specific challenges they face in reading, writing, and spelling.

To carry out the assessment it is important to be familiar with the main indicators of dyslexia, as all project partners of the project gathered the main indicators based on theoretical literature and practical experience from their countries.

There are common signs/characteristics found in one or more areas of activities: *General, Reading, Writing, and Spelling, Math, Time Management, Directions, Behaviour, Health, and Personality, Career.*

You can find detailed statements of indicators in the “**Common Dyslexia Signs and Remediation Strategies Handbook**” or in the executive summary “Evidenced based Indicators of Dyslexia in Adult learners” on the project website: www.dygi4adu.eu

!! Read the text about indicators carefully and write in your notebook which of them you have observed in your class, following the sections given in the materials.

You can see the indicators below.

Start writing!

What indicators have you observed?

Could you give general indicators of an adult with dyslexia!

They are highly intuitive.

May be able to sense emotions and energy of others

Remembers struggling in school

Frequently have dyslexic children

May be able to sense emotions and energy of others

Easily distracted/annoyed by noises and other things in the environment

May appear to “zone out” and be unaware of what is happening

Enjoys video games

Could you state - Reading, Writing and Spelling Indicators?

Difficulty reading unfamiliar fonts,

Avoids reading out loud.

May dislike public speaking,

Will commonly perceive that they “read better silently”.

Has adopted compensatory tricks to remember spelling and homonyms (their, there, they're), or misuses homonyms and has poor or inconsistent/phonetic spelling,

Reading fluency and comprehension fluctuates depending upon subject matter,

Frequently has to re-read sentences in order to comprehend,

Fatigues or becomes bored quickly while reading,

Reliance on others (assistants, spouses, significant others) for written correspondence,

Uncertainty with words, punctuation, and spelling when writing.

Reliance on spell-check and grammar-check,

Uncertainty with words, punctuation, and spelling when writing.

Reliance on spell-check and grammar-check,

Words out of context look "wrong.",

Poor handwriting - masks spelling mistakes,

Writes with all capital letters, or mixes capital letters within words.

Abbreviates words frequently.

Indicators from Math, Time Management, Directions Indicators

May understand higher math, but can't show it on paper,

May excel at math, or may still rely on tricks for remembering math facts,

Relies on calculators or finger counting.

May have difficulty with making change,

Difficulty with left/right and/or North, South, East, West,
 Gets lost easily or never forgets a place they've been,
 Difficulty reading maps,
 May have anxiety or stress when driving in unfamiliar places.
 Relies on others to drive when possible,
 May lose track of time and is frequently late - or is highly aware of it and is very rarely late,
 Finds it difficult to estimate how long a task will take to complete

Indicators of Behavior, Health, and Personality

May have a short fuse or is easily frustrated, angered, or annoyed,
 Easily stressed and overwhelmed in certain situations.
 Low self-esteem. Self-conscious when speaking in a group.
 May have difficulty getting thoughts out - pause frequently, speak in halting phrases, or leave sentences incomplete. This may worsen with stress or distraction,
 Self-conscious when speaking in a group. May have difficulty getting thoughts out - pause frequently, speak in halting phrases, or leave sentences incomplete. This may worsen with stress or distraction,
 Sticks to what they know - fear of new tasks or any situation where they are out of comfort zone, extremely disorderly or compulsively orderly,
 Confusion, stress, physical health issues, time pressure, and fatigue will significantly increase symptoms
 Extremely disorderly or compulsively orderly,
 Can be class clown, trouble-maker, or too quiet,
 Had unusually early or late developmental stages (talking, crawling, walking, tying shoes),
 Prone to ear infections; sensitive to foods, additives, and chemical products,
 Can be an extra deep or light sleeper; bedwetting beyond appropriate age,
 Unusually high or low tolerance for pain,
 Strong sense of justice; emotionally sensitive; strives for perfection,

Mistakes and symptoms increase dramatically with confusion, time pressure, emotional stress, or poor health.

State Memory and Cognition Indicators

Excellent long-term memory for experiences, locations, and faces,

Excellent long-term memory for experiences, locations, and faces,

Poor memory for sequences, facts and information that has not been experienced,

Thinks primarily with images and feeling, not sounds or words (little internal dialogue).

Career Indicators

Employed in job/position that will hide difficulties or not require dealing with problematic areas,

Hides difficulties from co-workers, friends and even family,

Becomes frustrated at "planning meetings" and sequential tasks - already has the answer and how to do it,

Becomes frustrated or overwhelmed with long forms or sequential processes,

Thrives in careers where visual-spatial/kinesthetic talents can be realised,

May pass up promotions or advancement opportunities that would require more administrative work,

Has difficulty focusing and staying on task - may feel more comfortable managing many different tasks simultaneously,

Difficulty with tests - passing standardised tests can be a barrier to career advancement,

Highly successful/over achiever, or considered "not working up to potential." Either way, displays extreme work ethic,

May be a perfectionist and overreact when they make a mistake,

Out-of-the-box thinker or operates with very strict rules for themselves,

Learns best through hands-on experience, demonstrations, experimentation, observation, and visual aids,

Difficulties taking notes

!! After compiling your list of Indicators of Dyslexia observed in the classroom discuss them in your learning group and summarise - what are the most widespread conceptions of dyslexia.

The authors of the material provided the following conclusions:

Based on the collection of all common signs for adult dyslexia, it is observed that there is a misconception that dyslexia just affects the ability to read and write. If this were true, it would be much easier to identify. In fact, dyslexia can have an effect on areas such as coordination, organisation and memory. Each person with dyslexia will experience the condition in a way that is unique to them and as such, each will have their own set of abilities and difficulties. Common signs can help adult providers and educators to identify whether the difficulties being experienced could be indicative of dyslexia and would suggest that referral to a specialist should be recommended for an official diagnosis. If a checklist and/or screener indicates a like to be dyslexic, a formal Diagnostic Assessment is the only way to confirm whether or not the difficulties a student/employee encounters are due to dyslexia.

There are different Screening Tests for adults, that can be used in practical life.

Different tests for dyslexia look at different skills. Below is a compilation of tests used to diagnose dyslexia in adult -hood. Screening tests can give an indication of possible dyslexic difficulties. They are often free or available online for a small charge but they cannot provide a diagnosis and are not 100% accurate. Besides, screening self-tests can be administered to identify additional symptoms that lead to a diagnosis and a tentative road map for intervention

You can find some of them here:

TEST	LINK
Take the test-Am I dyslexic? By Ronald D. Davis & Davis Dyslexia Association International	https://www.testdyslexia.com/cgi-bin/assessor.cgi?action=begin
Dyslexia Test - Screening for Signs of Dyslexia Learning Ally	https://learningally.org/Dyslexia/Dyslexia-Test
Self-Assessment Tool Fran Levin Bowman, Ed.D. & Vincent Culotta, Ph.D	https://dyslexiaida.org/dyslexia-test/
Online Dyslexia Test By Beatingdyslexia	https://www.beatingdyslexia.com/online-dyslexia-test.html
Adult Reading History Questionnaire Lefly & Pennington, 2000	https://dyslexiaida.org/screening-for-dyslexia/dyslexia-screener-for-adults/
Adult Dyslexia Checklist Dyslexia Association of Singapore	https://www.das.org.sg/about-dyslexia/what-is-dyslexia/adult-dyslexia-checklist.html
Dyslexia Test For Adults ADDitude Medical Advisory Panel	https://www.additudemag.com/dyslexia-symptoms-test-adults/
Dyslexia Test Online	https://exceptionalindividuals.com/candidates/neurodiversity-resources/neurodiversity-quizzes/dyslexia-quiz-test/

EiP Checklist in Italian	https://www.odipa.it/dislessia-adulti/
Adult dyslexia test in Polish	https://www.diaagnostyka-umyslu.pl/blog/dysleksja/dysleksja-u-doroslych-test-online/

A comprehensive set of tests is available for accurately diagnosing the disorder. Through evaluation, these tests offer insights into the existence of the disorder, its severity, and the spectrum of associated problems. It's important to note that difficulties in the reading process can differ for each individual, encompassing various manifestations and their nature.

The assessment includes the evaluation of skills such as reading accuracy and reading fluency. Additionally, the tests gauge both reading comprehension and listening comprehension. This multifaceted approach allows for a thorough understanding of the individual's condition and aids in tailoring appropriate interventions.

!! International Dyslexia association offers a screening test for adults. Try it!

<https://dyslexiaida.org/screening-for-dyslexia/dyslexia-screener-for-adults/>

If you suspect that you are dyslexic, there are several tools available that can help you gain a better understanding. Screening tests are informative, but they do not provide diagnosis, they are not perfect or entirely accurate.

Dyslexia can only be formally identified through a Diagnostic Assessment carried out by a certified specialist.

The advantage of formal diagnosis is that dyslexia is covered by the Equality Act 2010 (or other legislation acts in different countries). This mandates that education institutions and workplaces have a duty to take dyslexia into account and therefore make reasonable adjustments to accommodate individuals with dyslexia.

This also applies to life-long learning and adult education and its provision.

Watch the video: why diagnostics is necessary and how to diagnose

<https://www.youtube.com/watch?v=CjgYozVAds4&t=35s>

Diagnosing of Dyslexia

<https://www.youtube.com/watch?v=M1tA-5hfKJk>

It is possible also to use Adult dyslexia checklist.

<https://www.das.org.sg/about-dyslexia/what-is-dyslexia/adult-dyslexia-checklist.html>

!! Download it. Fill in and see your results –carry out a self analysis!

If you do not succeed to download – see the material below !

		Rarely	Occasionally	Often	Most of the time	Score
1	Do you confuse visually similar words such as cat and cot?	3	6	9	12	
2	Do you lose your place or miss out lines when reading?	2	4	6	8	
3	Do you confuse the names of objects, for example, table for chair?	1	2	3	4	
4	Do you have trouble telling left from right?	1	2	3	4	
5	Is map reading or finding your way to a strange place confusing?	1	2	3	4	



6	Do you re-read paragraphs to understand them?	1	2	3	4	
7	Do you get confused when given several instructions at once?	1	2	3	4	
8	Do you make mistakes when taking down a message from a voice call	1	2	3	4	
9	Do you find it difficult to find the right word to say?	1	2	3	4	
10	How often do you think of creative solutions to problems?	1	2	3	4	
		Easy	Challenging	Difficult	Very Difficult	Score
11	How easy do you find it to sound out words such as e-le-phant?	3	6	9	12	
12	When writing, do you find it difficult to organise thoughts on paper?	2	4	6	8	
13	Did you learn your multiplication tables easily?	2	4	6	8	
14	How easy do you find it to recite the alphabet?	1	2	3	4	
15	How hard do you find it to read aloud?	1	2	3	4	
TOTAL					SCORE	

RESULTS FROM THE ADULTS' TEST - WHAT IT ALL MEAN?

The research and development of the checklist have provided valuable insight into the diversity of difficulties and serve as a clear reminder that every individual is different and should be treated and assessed accordingly. However, it's interesting to see that some questions, which are typically associated with characteristics of dyslexic adults, also show up in the responses of people who are not dyslexic.

It is important to remember that this test does not constitute an assessment of one's difficulties.

It is just an indication of some of the areas in which you or the person you are assessing may have difficulties. However, this questionnaire may provide a better awareness of the nature of an individual's difficulties and may indicate that further professional assessment would be helpful.

Whilst we stress that this is not a diagnostic tool, research suggests the following:

Score less than 45 - probably non-dyslexic

Research results: no individual who was diagnosed as dyslexic through a full assessment was found to have scored less than 45. Therefore it is unlikely that if you score under 45 you will be dyslexic.

Score 45 to 60 - showing signs consistent with mild dyslexia

Research results: most of those who were in this category showed signs of being at least moderately dyslexic. However, a number of individuals not previously diagnosed as dyslexic (though they could just be unrecognised and undiagnosed) fell into this category.

Score greater than 60 - signs consistent with moderate or severe dyslexia

Research results: all those who recorded scores of more than 60 were diagnosed as moderately or severely dyslexic. Therefore, we would suggest that a score greater than 60 suggests moderate or

severe dyslexia. Please note that this should not be regarded as an assessment of one's difficulties. But if you feel that a dyslexia-type problem may exist, further advice should be sought. Copyright Ian Smythe and John Everatt, 2001

There is another possibility for you or your learners to do the test themselves

<https://www.additudemag.com/dyslexia-symptoms-test-adults/>

It is Dyslexia test: Free screener for adults.

Despite the fact that there are such self-assessment tests and evaluation protocols, fully-fledged diagnostics will also give other advantages in the provision of official support.

However, it should be noted that several tests will be required for diagnosis, they will be performed by a certified specialist and they are relatively expensive.

Some more suggestions for practical use

Dyslexia test:

https://www.youtube.com/watch?v=Jd_T6CzWpHM

How to recognise and treat adult dyslexia:

<https://www.youtube.com/watch?v=gWfWpE3Aiak>

How dyslexia looks in adults explained by experts:

<https://www.youtube.com/watch?v=qy5eTFf09L8>

How to diagnose dyslexia in adults:

<https://www.youtube.com/watch?v=5LnrLFkMPu4>

Best way to treat dyslexia:

<https://www.youtube.com/watch?v=CigYozVAds4&t=35s>

As with any learning disability, the more information that can be provided early, the better. Dyslexia is a common condition affecting millions of children and adults, but it does not define an individual's worth or potential. When dyslexia in adults is appropriately identified and explained, and adults with this condition are able to receive the support they need, dyslexia does not need to be a barrier to a productive and successful life.

Now you can check your knowledge about the assesment of Dyslexia in Adults

https://quizizz.com/admin/quiz/653cea18de8b4b345d914dbb?source=quiz_share

!! Fill in and see your results –carry out self - analysis!

Module 4. Pedagogical Approaches in Working with Dyslexic Adults to Promote Inclusion in the Learning Process

Aim: to acquaint adult educators and organisers with the main approaches in working with dyslexic adults to include them in the learning process

Tasks: to characterise the main approaches in learning, promoting equality for adults with dyslexia enabling them to feel equal and act equally in obtaining education and developing their professionalism to be involved in labour market

To develop the skills of adult educators and employers ensuring they can meet the needs of adults with dyslexia, facilitating their adjustment in the learning process and the workplace.

What does it mean “pedagogical approach”?

A pedagogical approach refers to the underlying philosophy, methods, and strategies and forms used in teaching and learning

It encompasses the principles and techniques that guide educators in designing and delivering instructions, facilitating learning, and interacting with learners.

The specific pedagogical approach employed in an educational process can greatly impact the learning outcomes and development of personality and future learning.

In the 21st century we pay the greatest attention to

The Learner-Centered Approach which places the learner at the centre of the educational process. It emphasises individual learning needs, interests, and self-directed learning, with the teacher serving as a facilitator and guide.

This approach is in contrast to :

The teacher-centered approach which places the teacher as the central figure in the classroom. The teacher is primarily responsible for imparting knowledge and controlling the learning process.

The Constructivist approach is based on the idea that learners actively construct their knowledge through interaction with their environment and experiences. It often involves hands-on learning, problem-solving, and critical thinking.

The Behaviourist approach focuses on observable behaviours and rewards and punishments to shape and reinforce learning. It emphasises rote memorisation and repetition.

The Experiential Learning approach encourages learning through direct experience and reflection on that experience. Learners engage in hands-on activities, experiments, or real-world applications of knowledge.

The Project-Based Learning approach involves learners working on extended, in-depth projects that require them to apply their knowledge and skills to solve real-world problems.

Today we also use **blended and complex learning approach as well as flipped classroom approach**.

The choice of a pedagogical approach depends on the educational goals, the subject matter, the needs and preferences of the learners, and the context in which learning takes place. Effective educators often adapt and blend different pedagogical approaches to create a dynamic and an engaging learning environment that best serves their students' needs and objectives.

What about the pedagogical approach for adults with dyslexia?

It refers to the specific methods, forms, strategies, and instructional techniques used to facilitate learning and support individuals with dyslexia on their way to qualitative education and professional development.

When choosing a pedagogical approach for adults with dyslexia, it's important to adopt a pedagogical approach that takes into account their unique learning needs and challenges.

Pedagogical approach for adults with dyslexia should be tailored to their specific needs focusing on structured, multisensory instruction, individualized support, supportive learning environment to help them overcome challenges and achieve their educational goals.

What are the most important pedagogical aspects to be paid attention to ?

The Multisensory Orton-Gillingham Approach, based on the Orton-Gillingham method is of great importance in working with dyslexic individuals. Multisensory teaching engages multiple senses (visual, auditory, tactile) It can help individuals with dyslexia to process and retain information. It

means that adult educators have to plan carefully different types of learning materials and special handouts.

Structured literacy instruction follows a systematic, explicit, and sequential approach to teaching reading and spelling. It breaks down language into its component parts, making it more accessible for individuals with dyslexia. The language has to be easy understandable.

Emphasising phonological awareness, which includes activities related to recognising and manipulating the sounds of language, can help individuals with dyslexia improve their reading and spelling skills.

Assistive technology tools, such as text-to-speech software, speech recognition software, screen readers, specialized dyslexia-friendly fonts and apps, can help adults with dyslexia access and engage with written information more easily. It can provide valuable support for adults with dyslexia in various learning contexts.

Some suggestions say: Use **sans serif fonts, such as Arial and Comic Sans**, as letters can appear less crowded. Alternatives include Verdana, Tahoma, Century Gothic, Trebuchet, Calibri, Open Sans. Font size should be 12-14 point or equivalent (e.g. 1-1.2em / 16-19 px).

You can also change the background colour, font colour as well as size. For some adults with dyslexia, it helps to better perceive the text and to understand what is written in it.

!! Now look at these texts – four different fonts. Which type of font you find easier to read. Discuss these issues in your study group !

1. Just at this moment Alice felt a very curious sensation – she was beginning to grow larger again. The miserable Hatter droppaed his tea cup and bread and butter and went down on his knee: “I’m a poor man, Your Majesty” he began.

2. Just at this moment Alice felt a very curious sensation - she was beginning to grow larger again.

The miserable Hatter dropped his teacup and bread and butter and went down on his knee: “I’m a poor man, Your Majesty” he began.

3. Just at this moment Alice felt a very curious sensation – she was beginning to grow larger again.

The miserable Hatter dropied his tea cup and bread and butter and went down on hisknee: “I’m a poor man, Your Majesty” he began.

4. Just at this moment Alice felt a very curious sensation – she was beginning to grow larger again.

The miserable Hatter dropied his teacup and bread and butter and went down on his knee: “I’m a poor man, Your Majesty” he began.

Repeated above

And now let us visit

British Dyslexia Association presents Dyslexia friendly style guide.

<https://www.bdadyslexia.org.uk/advice/employers/creating-a-dyslexia-friendly-workplace/dyslexia-friendly-style-guide>

!! In this guide you will have the opportunity to learn about creating a dyslexia-friendly learning environment. You will be also able to answer questions such as which colour is condidered to be the best for the background? Discuss these issues in your study group or with your tutor. If you watch the video individually – Conduct a self-analysis of the learning environment in your lessons /lectures and in the learning centre.

Individualised and personalised approach is of the utmost importance in recognising that individuals with dyslexia have unique strengths and challenges, it's important to tailor instructions to their specific needs. Individualised learning plans, regular assessments, and diagnostic assessments can help to track progress and adjust the learning to the individual.

Building self-esteem and confidence is crucial for adults with dyslexia. Providing positive feedback and encouragement can help motivate and inspire learners to persist in their educational journey. Encouraging adults with dyslexia to develop self-advocacy skills is important, so they can communicate their learning needs and access necessary support in various educational and professional settings.

Recognising and addressing the emotional and psychological aspects of dyslexia, including anxiety and self-esteem issues, is crucial. Mindfulness and emotional support strategies can help adults manage these challenges.

Creating an inclusive and supportive learning environment that fosters a sense of belonging and reduces anxiety is essential. This includes understanding and accommodating the needs of individuals with dyslexia, such as providing additional time for tasks and minimizing distractions.

It is important to use extended time for reading and writing assignments, and modifications, such as using audiobooks or alternative assignments, can help adults with dyslexia access and demonstrate their knowledge without being hindered by their reading difficulties.

Creating a supportive and understanding environment for adults with dyslexia in the learning process and the workplace is crucial to help them reach their full potential. Dyslexia is a neurological condition that affects reading, writing, and spelling, but it doesn't impact intelligence or other cognitive abilities. Here are some key characteristics of such an environment:

1. **Awareness and Education:** The first step is to raise awareness about dyslexia. Employers and educators should be educated about what dyslexia is, its challenges, and its strengths. This knowledge is essential to provide proper support.
2. **Individualized Support:** Recognize that dyslexia is a spectrum, and each individual may have different strengths and weaknesses. Tailor support to the specific needs of the person. This might include extra time on tasks, assistive technology, or modified reading materials.

3. **Accessible Materials:** Provide materials in accessible formats. This could include audiobooks, screen readers, or fonts designed for dyslexic readers. In the workplace, ensure that digital documents are formatted in ways that are dyslexia-friendly.
4. **Flexible Instruction and Testing:** In educational settings, offer flexible instruction methods that cater to different learning styles. This could involve hands-on learning, visual aids, and interactive activities. In the workplace, avoid relying solely on written instructions or assessments.
5. **Assistive Technology:** Employ assistive technologies like text-to-speech software, speech recognition software, and spell-check tools to facilitate reading, writing, and communication for individuals with dyslexia.
6. **Positive Feedback and Encouragement:** Recognize and praise the strengths and accomplishments of individuals with dyslexia. Encourage a growth mindset that focuses on improvement and effort, rather than solely on outcomes.
7. **Reduced Distractions:** Both learning environments and workplaces should minimize distractions. Provide quiet spaces or noise-cancelling headphones to help individuals concentrate.
8. **Mentorship and Peer Support:** Connect individuals with dyslexia to mentors or support groups where they can share experiences, strategies, and advice. Peer support can be invaluable in building confidence.
9. **Reasonable Accommodations:** In the workplace, make reasonable accommodations as required by law, such as extended time for tasks or meetings, or modifications to job tasks that rely heavily on reading and writing.
10. **Flexibility and Patience:** Be patient and flexible. Dyslexic individuals may take longer to complete certain tasks, but they can excel in other areas. Recognize and accommodate these differences.
11. **Anti-Discrimination Policies:** Establish and enforce anti-discrimination policies to prevent discrimination based on dyslexia or any other disability. Promote a culture of inclusion and diversity.
12. **Continuous Learning:** Encourage individuals with dyslexia to continue learning and developing their skills. Provide opportunities for further education or training.

Creating a supportive and understanding environment for adults with dyslexia is not only essential for their well-being but also valuable for society, as it allows them to contribute their unique skills and perspectives to the workforce and continue their lifelong learning journey

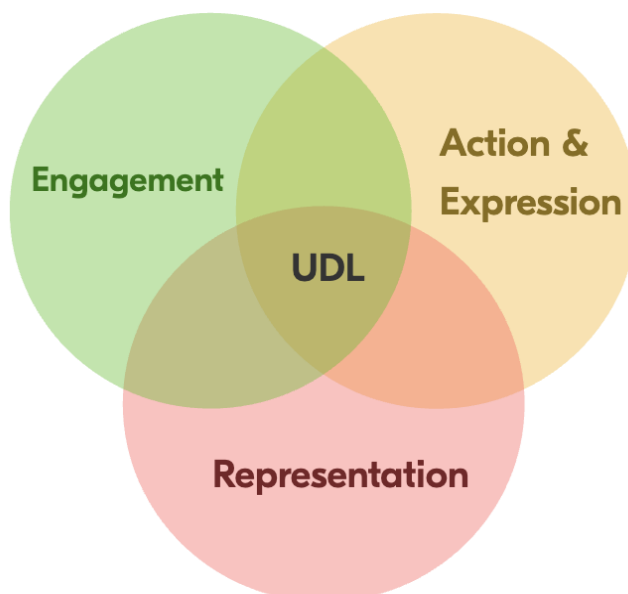
Encouraging adults with dyslexia to work in collaborative settings can help them learn from peers and build supportive networks.

Collaboration between educators, speech-language pathologists, occupational therapists, and other specialists can be beneficial in addressing the multifaceted needs of adults with dyslexia.

Adult educators can use in his/her practical teaching and learning “Universal Design for Learning” (UDL) that is based on “three pillars” Engagement, Action and Expression,Representation.” See picture below.

This design allows to adjust learning to everybody’ s needs, strengths and challenges.It can be reflected in the following picture .

Universal Design for Learning



Visiting these links will widen your knowledge about the use of UDL

https://assets.ctfassets.net/p0qf7j048i0q/3vzjvQAnt6xj0l080yVqXg/6e51e59e0b5b5eadd5e1c40ed135facd/Getting_started_with_universal_design_for_learning_UDL_Understood_1_.pdf

<https://lincs.ed.gov/state-resources/federal-initiatives/teal/guide/applyudl>

<https://lincs.ed.gov/state-resources>

UDL was developed by CAST (2018) as a framework for designing curricula that enables all individuals to gain knowledge, skills, and enthusiasm for learning.

Watching the following videos will give you an insight into why is it called universal , what does the design mean, what do these pillars or three principles mean.

UDL at Glance <https://www.cast.org/impact/universal-design-for-learning-udl>

UDL to change the world <https://www.google.com/search?client=firefox-b-d&q=UDL+to+change+the+world++>

..

Universal design for Learning <https://www.youtube.com/watch?v=N-OzIBzSEmU>

Reducing barriers to learn <https://www.youtube.com/watch?v= WDisGLZXtY>

_Removing the Barriers: Planning for ALL

<https://www.youtube.com/watch?v=MzL8yMBKM7k>

What is UDL Katie Novak <https://www.youtube.com/watch?v=eYN-qrKIIYI>

We will use now these three pillars or principles to schedule a class for adult learners and give you some tips.

Engagement

Engagement – How can I satisfy the needs and wishes of everybody? How can I engage everyone – people with different learning and professional experiences, challenges, different ages, different motivations, different life problems? This diversity can be significant, but at the same time, it is a challenge for the educator.

How to make learning relevant to learners needs and wishes ?

In what ways are the students in my class supporting each other ?

As an educator, how can I support adult learners?

You can

Carry out a survey about their needs, interests, wishes

Use the findings during the learning process

Observe your learners in different situations

Organise discussions during the lecture, make it interactive

Try to talk openly after lectures

Analyse carefully their presentations, written work.

Listen carefully to learners presentations

Feedback on their work considered as very important

There can be more possibilities how to promote the engagement of everybody.

Here we can draw the following conclusions – You have to know your learners !

You have to formulate the goal of the course very clearly , in language that everyone understands!

You have to show a way of learning that will be acceptable to all.

If we are speaking in the context of the Erasmus+ project "Enhancing Digital Tools for Inclusive Dyslexia Adult Education," you have to know the signs of dyslexia and pedagogical and psychological approaches to recognise these learners!

Representation

- How to present the information so it is understandable for all ?
- Think about workload options – Is everybody capable of managing?

- What options of workload to give students who need support ?
- How to organise groupwork and peer work?
- What materials to use during the lecture, practical lesson to satisfy different learning styles and needs?
- What methods and strategies are suitable for all ?

You can:

- give the information in different ways according to the adult learning styles , needs, wishes of students ,use modern technologies
- balance the workload between class and home
- practice individualised and personalised learning
- use various sources and materials during the course to ensure motivation for learning
- cooperate and share learning materials with your colleagues. Attend the classes of your colleagues to learn their experience
- practice playing learning and “ice breaking” games to create a fun and positive atmosphere in the class.

Try out the methods from given slide shows, different sources, and ask colleagues for suggestions.

Ex. <https://www.slideshare.net/sheemooii22/modern-methods-in-adult-education>

Use the experience of different educational establishments and countries ,for ex. the experience of the University of SanDiego Professional and Continuing Education Centre which provides 15 strategies for teaching adults. They are the following :

15 Strategies for Teaching Adult Learners

1. Keep your lessons relevant
2. Tell stories as you're teaching
3. Break up the information to avoid cognitive overload
4. Get everyone involved
5. Keep them engaged
6. Focus on your learners' life experience
7. Be mindful of different learning styles
8. Make your material visually stimulating
9. Let them explore on their own
10. Encourage questions and discussion

11. Provide feedback
12. Offer encouragement
13. Be flexible
14. Be passionate
15. Smile and have fun

Action and expression –

- how to implement assessment ,
- what methods and forms to use to demonstrate what the learners know already ,what difficulties do they face and why
- how to provide flexibility with timing and pacing
- how succesful am I with assistive technologies for students ,
- do they have regular access to assistive technologies
- how effective is the support system to avoid learning obstacles

You can

- provide your students with checklists and calendars
- Enhance the interactivity of lectures and seminars to gain a deeper understanding of the challenges in course acquisition.
- try to link the course with real life situations
- allow the students to demonstrate their knowledge and skills by using different types of presentations such as telling ,story telling,questions and answers,problems and solutions etc.
- praise your students for good job during the classes
- allow them to be in the role of adult educator
- provide the students with access to assistive technologies
- speak with your students openly
- analyse the support system you give to students to overcome barriers

If you try as adult educator to implement these three pillars or principles in real life you will become a good adult educator with knowledge of your learners, expertisea specific subject field, skills and competences to guide the learning process of adults.

At the same time we have to keep in our mind that all adults have already their personal strategies how to learn , how to develop professionally.

!! Watch the video and discuss in the study group – How to adjust personal strategies with the learning group strategies! Write your ideas in the chat of the learning platform!

My dyslexia strategies

<https://www.youtube.com/watch?v=ZGtRaVbZCRw\>

It's important to note that each individual with dyslexia is unique, so a combination of different approaches may be necessary. Additionally, ongoing assessment and feedback are essential to adjust the instructional approach as needed. Finally, a supportive and understanding environment is critical to the success of adults with dyslexia in their educational and professional pursuits.

Bryan McCormick in Dyslexia frindly style guide recommends for educators:

For us to succeed as educators we need to be able to differentiate our instruction for all learners.

Best practices for teaching adults with dyslexia are often best practices for all your students.

To teach your students you must know them and be able to identify signs of dyslexia. Even students that know about their diagnosis may feel too much shame to share this with you. These students will have developed a lifetime of coping mechanisms and ways to mask their struggles, so it can often be more difficult to spot an adult with dyslexia than a child with dyslexia.

Useful points to know:

1. Make sure that all your students can understand what you are asking them to do especially those with dyslexia. If you are giving verbal only directions, consider a multi-sensory approach.
 - Use visual directions such as a power point to go along with your verbal directions
 - Speak slow and repeat complex steps
 - Make sure students have access to your written directions
 - Check for understanding. Even a quick, “*what did you hear me say?*” question to your students can be enlightening
2. Create and maintain good classroom routines. When students know what to expect we all win. Not only is this a best practice for all your students but having a strong and predictable classroom routine can help students with dyslexia feel welcome and reduce their anxiety around learning. It can be highly emotional for adult students with dyslexia to be in the classroom. Remember how we talked about how adult students with dyslexia can feel like they are stupid or lazy? Strong classroom routines will help alleviate this anxiety and lead to stronger learning outcomes.
3. Have scaffolds designed for your adult students with dyslexia available to all your students. Adult students with dyslexia can feel acute shame in the classroom so it’s important to encourage them to take advantage of extra support. For instance, try pre-teaching high level vocabulary and encourage all your students to access scaffolds and instructional aides (i.e. sentence starters, graphic organizers) and use them in your instruction as examples when teaching.
4. Support and showcase the strengths of all your students, especially your adult students with dyslexia. Give students with dyslexia a chance to succeed and show their mastery for all the world to see, or perhaps just your class. Adult students with dyslexia may have spent their learning career feeling deep shame. Help them change the narrative by encouraging them to showcase their strengths. Some strengths of these adult students and their success opportunities may be:

Creativity: Showcase their creative writing. Share their their story arcs or outlines with the class.

Problem solving: Help them show their work and thinking in math. Their thought process could be an example of how to use multiple approaches to solve a problem.

Empathy: Introduce your adult student with dyslexia to complex characters and have them share their character analysis with the class.

Meta thinking: Help your adult students with dyslexia showcase their higher-level planning skills.

Narrating skills: Support your students narrative writing with strong academic scaffolds such as mentor texts, graphic organizers, and rubrics. Then showcase your students' narrative writing successes!

Suggested videos to watch at home

Have a look: Assistive technology and Dyslexia

<https://www.youtube.com/watch?v=oydzCqCfoFw>

Or another: Student with dyslexia blossoms with assistive technology

<https://www.youtube.com/watch?v=JKrgxeXDtjk>

You can watch video How to recognise and treat adult dyslexia

<https://www.youtube.com/watch?v=gWfWpE3Aiak>

Some other suggestions – Overcoming dyslexia as an adult

<https://www.youtube.com/watch?v=WcWMELPmQpg>

A strategic approach and dyslexia can be useful also in adults

<https://www.youtube.com/watch?v=a-R4TMv2E-8>

The adult side of dyslexia – Dyslexia Training Institute

https://www.youtube.com/watch?v=KX2XX_YS1uU

One more suggestion – give an extra time to complete the task.

For dyslexic people it is better to have the material in front of them not in the screen somewhere far away.

You can find also Dyslexia programs for adults.

<https://www.readandspell.com/dyslexia-programs-for-adults>

There are different programs used in pedagogical work. Some of them are characterised below.

Multi-sensory programs

Orton-Gillingham is an approach that was developed in the 1930s to help dyslexic learners improve their reading and spelling skills. It combines multi-sensory learning techniques with a structured and sequential review of English phonemes (sounds) and can be seen as an overarching umbrella approach under which many different methods and systems fall.

TOP TIP: Multi-sensory learning means you hear, see, and move your body in some way to reinforce your learning. This final type of sensory input is called kinesthetic learning.

1. The Barton Program

This program aims to change the way someone with dyslexia approaches reading. It's a teaching program that both professional and informal literacy tutors may be trained in and it is based on the Orton-Gillingham approach. This means there is a review of phonics, or the basic sounds of English, and how they are represented by letters. An understanding of phonics helps you read because it allows you to decode words.

The Barton program also places emphasis on teaching vocabulary and how to recognize Latin roots, which may help with extracting meaning in reading. The method includes instruction in spelling rules as well. While it's popular among home-schoolers, Barton can also be used to help adults read. It's an intensive program with 10 levels, 18 steps per level and an assessment at the end of each.

2. The Wilson Reading System

This program, also based on Orton-Gillingham, is often used to teach adolescents but may be appropriate for adult learners as well. It's multi-sensory and combines audio, visual and tactile learning techniques in sessions that reinforce reading and spelling skills. You may recognize it by the sound-tapping that students using the program do. This is to help them identify the sounds that make up the words they read and bring a tactile element to the process.

The Wilson Reading System is popular among private tutors who can obtain a certification in teaching it. A key feature is the materials students read tend to be of interest to older learners and vocabulary and text complexity increase as skills develop. It also allows teachers to customize their lessons, though a session must cover ten different skill areas (vs. spacing these skills out so only one is practiced per lesson). It takes 2-3 years to complete the program.

3. The Davis Program

This program is based on the book *The Gift of Dyslexia* written by Ron Davis, a dyslexic adult who taught himself how to read. The activities and approaches were tested with adult learners and many of the methods work well for individuals with autism as well. Activities are designed to help an adult discover what he or she is good at, and then harnesses this motivation for learning. The book aims to give adults autonomy in learning and provide them with the strategies they need to control the cognitive processes involved in reading.

It is multi-sensory and can be taught by a tutor working 1:1 with a student. Nonetheless, an adult with dyslexia can also read the book and undertake some of the techniques on his or her own. Before deciding on a literacy program, consider your goals, including what you'd like to get out of it and if they are realistic based on how you plan to use it. If you're signing up for a rigorous system that provides benefits only after long-term use, be aware of that and adjust your expectations accordingly.

A lot of help can come from various technology, computer-based programs that are improving every year and will become more and more accessible. That will be discussed in the next module

Module 5. Technological Approaches for supporting dyslexic adults, aiming to overcome learning obstacles and provide inclusive assistance for all.

Extensive research and studies have proven that a student's IQ is not related to his or her reading ability. However, if a person lacks access to quality education, their knowledge, skills and competences fall behind those of others with a similar level of IQ, resulting in their inability to participate successfully in the labour market and achieve high intellectual performance.

Although computers, tablets, and smartphones are highly accessible today and a large population has regular access to internet with countless tools and other support options, nevertheless, studies show that more than 50% of students drop out of education system because of their inability to read at an appropriate level.

The aim of this module is to provide an insight into technological solutions and assistive technologies for adult educators, helping them better understand how to enhance learning for adults with dyslexia.

The task of this module to provide an opportunity to learn about technological approaches in working with dyslexic adults, offering them support in the learning process
It aims to promote the development of skills for choosing the appropriate technologies for adults with dyslexia as well as to enhance personal technological skills

All kinds of assistive technologies and digital tools use digital devices and, in this case a digital device and general knowledge on its usage are prerequisites for using these tools and technologies. Concerning technological tools and assistive technologies, the advantages of speech-to-text, text-to-speech, OCR (optical character recognition tool), spellchecker, and reading support software has

long been recognised as the most powerful assistive technologies for all kinds of reading disabilities, including dyslexia. When considering dyslexia in particular, special fonts, graphic organisers and visual reminders are mentioned as very helpful. This chapter summarises not only traditional tools and technologies but also lists some useful AI tools that have been found helpful for dyslexic individuals.

In this module we'll explore each type of assistive technology and discover how these tools can be helpful in supporting adults with dyslexia.

Reading support software and audio tools

Speech recognition, Speech-to-text

Dragon Professional Individual

(<https://www.nuance.com/dragon/business-solutions/dragon-professional.html>)

is a speech recognition software developed by nuance communications. It allows users to dictate text and perform various computer tasks hands-free, using their voice. It is highly accurate and adapts to the user's speech patterns over time, improving recognition accuracy. It supports dictation in a variety of languages and allows users to create custom commands for specific tasks, such as opening applications or navigating to specific files.\

Otter

(<https://otter.ai/>)

is a cloud-based speech to text program especially aimed for mobile use, such as on a laptop or smartphone. The app provides real-time transcription, allowing you to search, edit, play, and organize as required.

Google Gboard

(https://play.google.com/store/apps/details?id=com.google.android.inputmethod.latin&hl=en_GB)

has a speech input option which is directly available from your device's virtual keyboard. Even though Google Keyboard isn't a dedicated transcription tool, as there are no shortcut commands or text editing directly integrated, it does everything one needs from a basic transcription tool.

And as it's a keyboard, it allows to work with any software one can run on Android smartphone, so one can edit, save, and export text using that.

Just Press Record

(<https://www.openplanetsoftware.com/just-press-record/>)

is a mobile audio recorder that comes with features such as one tap recording, transcription and iCloud syncing across devices. Users can quickly and easily turn speech into searchable text.

There's support for more than 30 languages.

Livescribe Smartpen

(<https://us.livescribe.com/collections/smartpens>)

records lectures/meetings while the user takes notes. It has transcription capabilities in 27 different languages. The pens are equipped with an IR camera and cannot be used with normal paper. Notes and audio can be transferred wirelessly to a mobile or computer.

Tilde Voice

(<https://speech.tilde.ai/>)

is an AI powered speech recognition tool that provides speech-to-text functionality from a pre-recorded audio file or dictated speech. The recognised speech is transcribed and sent to users registered e-mail. TildeVoice operates on all platforms and in English, German, Latvian, and many more languages.

Text-to-speech

Balabolka

(<https://www.cross-plus-a.com/balabolka.htm>)

is a free text-to-speech software which can be customised in terms of pitch, speed and volume. It allows users to listen to text instead of reading it. It can also highlight the sections of the text as it reads. It includes a spellchecker, customisable hotkeys and the ability to save audio files.

Read & Write (<https://www.texthelp.com/products/read-and-write-education/>)

is an assistive technology with features such as text-to-speech, word prediction and translate.

RoboBraille (<https://www.robobrainle.org/>)

is a web-based service that provides automated conversion of text documents into various accessible formats for individuals with visual impairments or reading difficulties. It allows users to upload documents in different formats, such as PDF, Word, or plain text, and converts them into accessible formats like Braille, large print, or audio. The service employs advanced algorithms and linguistic tools to generate accurate and high-quality accessible versions of the documents. RoboBraille helps to enhance accessibility and improve the reading experience for people with print disabilities.

Voice Dream Reader (<https://www.voicedream.com/>)

is a versatile reading tool for iOS Apple devices – iPhone, iPad and Apple Watch. Featuring Dyslexia friendly font, text and audio synchronization, customizable font size and colour combinations, as well as full VoiceOver support.

Speechify (<https://speechify.com/>)

is a mobile, chrome extension and desktop app that reads text aloud using a computer generated text to speech voice. The app also uses optical character recognition technology to turn physical books or printed text into audio. It lets users take photos of text and then listen to it read out loud.

E-readers are either digital devices or text-to-speech software that helps the readers to read a book by listening to it in audio format.

OCR

Optical Character Recognition (OCR) is a technology that is automating data extraction from printed or written text from a document or image and then converting the scanned text into a computer-readable format to be used for data processing. Not only apps on smartphones and tablets (like *Google Keep* (keep.google.com),

OCR for Mobile

(<https://play.google.com/store/apps/details?id=com.peace.TextScanner&hl=en&gl=US>)

CamScanner (<https://www.camscanner.com/>), etc.), but also special digital highlighters or pens (like *ScanMarker Air* (<https://scanmarker.com/products/scanmarker-air-pen-scanner>),

C-Pen Reader

(<https://cpen.com/>)

IRISPen (www.irislink.com/) allow users to scan information instantly and store it in the device. The handheld scanning pens are able to scan an image, machine printed or handwritten text. Simply slide across a line of text and the information instantly appears on the screen or is read aloud or saved in digital text and/or audio format.

BrunoMaster

(<https://brunomaster.com/>)

is an assistive technology software and reading machine. It can be used for adults and school children. BrunoMaster – is an educational platform, with text-to-speech. It allows the user to view scanned or imported text in different font sizes and follow the audio file being read aloud.

!! Discuss in your learning group - What mentioned tools have you tried in your practical work? What are their advantages and disadvantages?

Audio tools and word prediction apps

The possibility to listen to audio books from Kindle, YouTube or any other source has been widely known for decades now, but the ability to record audio as assignment, question or answer has been implemented recently into most learning platforms that are used by educators, for example,

<https://classroom.google.com/>

<https://edpuzzle.com/>

<https://info.flip.com/en-us.html>

<https://www.formative.com/><https://quizizz.com/>

<https://www.classdojo.com>

And many more platforms have an option to ask or answer the question in audio format, giving possibility for a learner to learn and to demonstrate their knowledge.

As with audio books, word prediction has been known for a while already as very useful tool not only for dyslectic people. Most iOS and Android mobile devices contain some form of word prediction, but more advanced tools are also available. These can be used as a writing tool to help people with dyslexia reduce keystrokes, improve spelling, and save typing time

ClaroRead

(<https://www.texthelp.com/en-gb/solutions/dsa/claroread/>)

is one of the more popular options for word prediction. This simple program relies on huge prediction dictionaries to “guess” the intended word. Moreover, it features phonetic prediction, so typing “n” can result in a “knowledge” suggestion.

Spellcheckers and grammer tools

Grammarly

(<https://app.grammarly.com/>)

is an AI powered tool that helps one improve its writing by checking spelling and writing errors and making suggestions for better text and language style quality. It operates in English only and provides desktop software as well as web page.

Ghotit

(<https://www.ghotit.com/>)

is an assistive technology that helps people with reading and writing. It includes spelling and grammar assistance, word prediction, text-to-speech, a personal dictionary and a dyslexia friendly user interface with customisable fonts, colours and layouts.

Ginger

(<https://www.gingersoftware.com/>)

s a writing assistant that helps overcome writing difficulties, assists teachers to support students with different abilities, and creates inclusivity among organizations and businesses. It also has text-to-peach functionality.

Dyslexia fonts and other support for digital text recognition

Digital text recognition is as important as printed text recognition that is why educators should foster dyslexia friendly digital environment by providing digital texts either in special dyslectic friendly font or by using colored backgrounds or highlighted rows of text. British Dyslexia association has prepared guidelines for digital materials here.

Dyslexie font

(<https://www.dyslexiefont.com/en/free-dyslexiaoffice/>)

as created by a graphic designer with dyslexia. With wider spacing and unique letter shapes it is easier for the user to distinguish between individual letters, for example, b & d. The baseline alignment is heavier than the top, which helps prevent “flipping” or “rotating”. Punctuation marks are more distinct, making them easier to identify.

EasyReading font

(<https://www.easyreading.it/en/>)

was created by Federico Alfonsetti with a Design for All methodological approach to help dyslectics in reading with less difficulty and to increase reading speed, while also being a highly-readable font for typical readers. It is a hybrid font comprising both serif and sans serif letters. The font’s high legibility derives from the careful design of the characters, while its hybrid nature prevents the so-called crowding effect: the letters have special serifs so they aren’t confused with those of a similar shape. This provides wide, calibrated spaces, allowing words and lines to “breathe”. Longer than average upstrokes and downstrokes create more space between the lines.

ADYS font

(<https://adysfont.com/en>)

is a font designed for people with dyslexia. The font reduces letter swapping, helps the reader keep track of sentences and gives clearer shapes. The blackness of punctuation marks and capital letters are enhanced to help distinguish between the beginning and end of sentences

Graphical organisers

MindView

(<https://www.matchware.com/mind-mapping->)

software is an assistive technology that aids users in creating “mind maps”. Mindview helps turn monotonous information into colourful, memorable, and highly organised diagrams that work in line with the brain’s natural way of thinking and working. MindView allows for visual graphics, colour coordination, reorganisation of ideas, and interactive elements such as text documents, website links, videos files and sound files to be included into Mind Maps.

Miro

(<https://miro.com/>)

is a platform for creating different graphs and diagrams, it provides collaborative and easy-to-use environment that can help dyslectic people to collaborate, organise information and create a structure of everyday needs.

ConceptBoard

(<https://conceptboard.com/>)

is an on-line graphical organizer tool, that is suitable for dyslectic people for creating KWL (know, want, learn) charts it also supports audio/video files.

Google Keep (keep.google.com) and *Google Calendar* (calendar.google.com) can be used as easy accessible and easy-to-use tools for organizing information and creating reminders.

!! Discuss in your learning group - Which are the tools you hear for the first time ? What mentioned tools have you tried in your practical work?

AI support for dyslexia

Although AI powered tools and chatbots have been known for a while, since Open AI launched its groundbreaking chatGPT tool at the end of 2022 that now can see, hear and speak (<https://openai.com/blog/chatgpt-can-now-see-hear-and-speak>), even young schoolchildren no longer ask why we should know anything about artificial intelligence (AI). AI technology as such and its tools are widely used in almost every learning app, tool or environment as well as at classrooms around the western world – for teachers to create lesson plans, prepare lessons, assignments and tests (like <https://learnt.ai/>)

, and for students to look up the answers to questions they have been asked or to generate essays, poems and many more (like chat.openai.com). One of the greatest strengths of almost any AI language model tool is a possibility for a person to communicate with it in their mothertongue. AI technologies have been implemented in almost every assistive technology and learning app, software, tool or platform we use today and that have been reviewed earlier in this module, but there exists AI tools that can be helpful for dyslectic adults supporting their everyday life. Few examples of these tools are:

Microsoft Immersive Reader (<https://learn.microsoft.com/en-us/training/educator-center/product-guides/immersive-reader/>)

is designed to make reading easier and more accessible for users with reading difficulties. The tool has several features that can be customised to suit the user's needs. For example, text – to – speech, line focus (highlighting lines as the reader reads), picture dictionary, parts of speech highlight, syllable breakdown, and translator.

Ghotit Real Writer & Reader for Windows

(<https://www.ghotit.com/dyslexia-software-real-writer-for-windows>)

is a comprehensive literacy software. It helps children and adults with dyslexia/dysgraphia to read, write and correct texts

Not only tools but even learning platforms more and more are implementing AI language models and algorithms to support and assist students in their learning process and teachers in their preparation process. For example,

some platforms offer AI generated questionnaires, quizzes and tests and are known to be very handy for teachers (like <https://www.formative.com>)

<https://quizlet.com/>

<https://www.dunno.gg/>

and many more);

· some platforms support personalised learning experience, by implementing adaptive learning, personalised recommendations, personalised assessment and feedback, individual learning paths.

For example, Khan Academy (<https://www.khanacademy.org/khan-labs>)

claims that they have implemented such AI tool that works as personal tutor for every student and personal assistant for every teacher;

- some platforms (like <https://activererecall.com/>

offer to identify the best learning intervals for spaced repetition of study material based on students past performance. This web site have collected 84 AI enhanced tools that help learner to practice new knowledge: <https://theresanaiforthat.com/ai/active-recall/>

there are platforms that offer to generate personalized content like stories for readers to be engaged in (like <https://www.getsprinkle.ch/>

The summary of different AI tools including those that can be useful for dyslectic persons, can be found here:

<https://www.mattivey.com/ai-tools>

<https://tinywow.com/tools/write>

<https://topai.tools/s/personalized-learning-platform>

<https://theresanaiforthat.com/ai/active-recall/>

We invite you to take the quiz and test yourself on how well you have acquired the course.

https://quizizz.com/admin/quiz/653f8c8dc24698005c37738b?source=quiz_share