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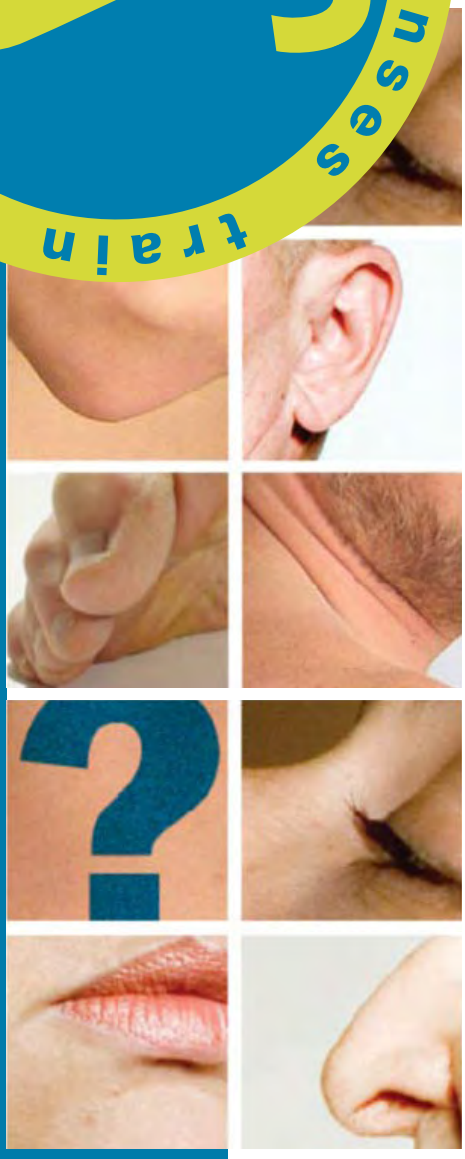
train your senses train your senses

Learning Games

for joung dyslexic

adults



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Introduction

The EDysGate project has developed a series of Internet-based training modules called Learning Games tailored for young dyslexic adults. This Guide is for trainer, manager and administrator. EDysGate has been developed with support from the European Commission.

The project partners are:

- E-Learning concepts Rietsch KEG - Austria
- CREA - Confederacion de Empresarios de Aragon - Spain
- Ibis Creative Consultants Ltd - UK
- Havredal gl. Skole - Denmark
- Verein Spunk - Austria
- CEC - Continuous Education Centre Technical University – Varna, Bulgaria
- SUELL Team ApS – Denmark

What challenges does EDysGate face?

Many people see dyslexia just as a reading and writing difficulty. But the problems that cause these difficulties also impact on many other life skills. Internet-based exercises can help to train specific skills of dyslexic persons. Such exercises are available, but the majority of them are focused on children and do not address the specific underlying problems of young adults. Young dyslexic adults do not like them due to their childish nature or because they seem irrelevant. The challenge was to provide content that was stimulating and engaging for these users.

What is a Learning Game?

EDysGate has provided a highly motivating and stimulating learning environment for a carefully selected range of skills known to be important for young dyslexic adults. It has addressed seven areas of particular importance for development of vocational skills. The areas are targeted through direct and indirect stimulation. The areas are: **(1)** Visual discrimination, **(2)** Visual memory, (3) Visual sequence, (4) Auditory discrimination, **(5)** Auditory memory, **(6)** Auditory sequence and **(7)** Spatial position (e.g. top, bottom, behind, ahead, left, right).

The principles behind the exercises are designed to be not specific for any given language - they work for all individuals across Europe. They are developed in collaboration with the user groups as well as those who train them. EDysGate have carried out user pilots in UK, Spain, Bulgaria, Denmark and Austria.

Why use the Learning Games?

The main purpose of using the Learning Games is to develop the vocational skills of young dyslexic and even improve literacy skills. As a trainer you get a new kind of educational material to use in your training. The EDysGate games are not like “usual” game for youngsters on the Internet – and should not be introduced as such. It is necessary to emphasis the focus of the Learning Games – that the students can develop skills playing the games. The Learning Games are for use in training, but you might discover, that your students play them in their spare time too.

The Learning Games are designed to motivate and engage your student in training. So by using the Learning Games you get a highly motivating teaching resource, and you equip your students for learning.

Who can benefit from Learning Games?

Young dyslexic adults, e.g. after school, at vocational training, at university, at the beginning of their professional career etc.

Trainers, who train dyslexic young adults

Overview on the areas

These areas have been chosen based on research which suggests they will stimulates parts of the brain that are active in many activities including reading. This means that, surprising as it may seem, development of these skills could help the ability to improve literacy skills. How can this be possible? Because reading and writing skills are not separate abilities that are held in their own parts of the brain. Reading uses a series of brain processes, and if we stimulate the key areas, then their neurological links will develop and be more receptive to learning, including learning to read. For example, many dyslexics have problems with recognising words, confusing two visually similar words. By training in visual discrimination, that difficulty should be reduced. The following gives a basis outline of the skill areas that this project hopes to address.

(1) Auditory discrimination

Auditory discrimination is about the distinguishing between two or more sounds as pitch and tone. There are several types of “sounds”, including language dependent, music dependent and general “life” sounds, and they are inter-related, though different. Sound discrimination usually develops at an early age. However, many dyslexics have been found to have suffered from ear infections at a key stage in development of their ability to distinguish between sounds. As a consequence, long term auditory discrimination

may have been affected since they were unable to distinguish the small differences when they neural pathways were due to develop. Often the dyslexic does not appear to have problems in a quiet environment. However they may have difficulties distinguishing sounds where there are many sources of sounds, for example, when a manager is talking in a noisy factory. This is usually disguised since they can still guess the meaning from the rest of the sentence. Some still have difficulties hearing the difference between vowels sounds, or fail to hear the final sound clearly. These difficulties are rarely apparent in everyday speech, but can be clearly seen in spelling.

(2) Auditory memory

Auditory memory span may be considered to be the number of items the memory can store, and is usually seen as a sequential storage and retrieval function. While we may be restricted in how much we can increase it (in the same way that you cannot develop any person into being an Olympic marathon runner – they have to have a built-in ability), it is possible to teach implicit and explicit strategies. Therefore you may not be able to remember much more, but you can group things together in better ways to apparently remember more. These strategies may be applied in areas as different as writing down telephone numbers to making notes in a classroom setting. However, they are also important in tasks where comparisons are implicitly required, such as in using analogies that require comparing parts of words. For example, rhyming skills have been shown to be important in literacy development. But if you cannot hold the word in your auditory memory long enough to find a rhyming word (which you may seek to work out the spelling) then your literacy skills will be impaired.

(3) Auditory sequence

In many cases we need to not only recall the events, but also the order in which they occurred. Change the order of who said what to who and you will soon become confused! But that is the sort of problem some dyslexics suffer. The tasks presented here provide simulation of the auditory processes and allow the learner the opportunity to develop skills to not only remember, but to recall sequences. The best way our Olympic marathon runner can train is by running marathons. In the same way, the best way for a dyslexic individual to improve their auditory sequencing skills is to practice those skills.

(4) Visual discrimination

Visual discrimination is about the distinguishing between two or more images, either presented at the same time or one after the other. As mentioned above, they are important for literacy development since we need to distinguish between shapes to recognise individual words. As the child grows and begins to build the relationships between sounds and words or letters, so they refine the process and can discriminate between smaller and smaller differences. But they only note the differences between word “shapes” at the level to which they can form those associations and know that they are different. Because the dyslexic has trouble with reading, they do not receive the repeated exposure to the shapes of the words and therefore do not have such a clear mental map of the small difference between words. Nor can they build the relationships between those repeated patterns and the associated sounds. So for example, they can confuse visually similar words such as “cat” and “cot”. These activities will attempt to build the abilities in this area of weakness.

(5) Visual memory

There are many different types of visual memory, but the ones we shall focus on are those associated with literacy. In this area we are concerned about recognising a shape and holding it in some form of short term memory, and then transferring it to long term memory. We also need to consider retrieval of that image. There are two ways to develop the memory: a) by exposure to certain tasks one can stimulate development of neural pathways and b) to develop visual strategies which allow greater storage capacity. At the most basic level, this will improve copying from the board. But it should also improve the ability to recognise, remember and recall those words which do not have regular spelling.

(6) Visual sequence

Visual sequence, as the title suggests, is about presentation of visual information on a timeline. Normally, when we look at a scene, we can perceive things all at the same time, as opposed to a conversation where words come one after the other – i.e. they are on a time line. Visual sequencing is about storing and recalling the visual images in the same order as they were perceived. These skills go beyond the literacy skills as shown in the tasks for this area. They could include recalling things in the order in which they were shown, as well as the skills of developing a story for writing whereby the “events” are “seen” in the brain.

(7) Spatial position (e.g. top, bottom, behind, ahead, left, right)

Many dyslexics have problems with spatial awareness, and in particular expressing themselves in terms of “movable” relationships. For example “up” is clearly a fixed position. But if two people face each other, what is to the left for one person is not to the left for the other. By practicing these areas, the ideas can become more fixed. Since they are positioned in space, some of the games attempt to use physical (rather than just virtual) movement as an option, such as moving the feet on a dance mat.

Overview of the learning games

Learning Games	For notes

Auditory discrimination

Intonation	
Rhyme	
Initials	
Snap	
Names	
City names	
Music sound	
Rhythms	
Noises	
Accoustic images	
Department store	
Airport	
Street	
Restaurant	
Cinema	

Auditory memory

Same sound	
Ringtones	

Trafic noises	
Percussion rhythm	
Names	
City names	
Compatible sound	
Ringtones	
Trafic noises	
Music instruments	
Names	
City names	
Rhyme pairs	
Word-Sound-Pairs	
Snap - accoustic images	
Department store	
Airport	
Street	
Restaurant	
Cinema	

Auditory sequence

Questions to a story	
Pack one's bag	
Aligning pictures and noises	
Supermarket	
Coming home 1	
Coming home 2	
Traffic noises 1	
Traffic noises 2	
Play a sequence	
Noises 1	
Noises 2	
Noises 3	
Music sounds 1	
Music sounds 2	
Do you speak Klingon?	
Lesson 1	
Lesson 2	
Lesson 3	
Lesson 4	
Lesson 5	

Visual memory

Same picture	
Shoes 1	
Shoes 2	
T-Shirst 1	
T-Shirst 2	
Car Logos	
Compatibel pictures	
Cars	
T-Shirts	
Characters 1	
Characters 2	
Shoes	
Chinese	
Picture-initial letter	
Find the object	
Balloon 1	
Balloon 2	
Sailing 1	
Sailing 2	
Sailing 3	

Moving letters	
Market	
Bücher	
Libro	
Ønsker	
Totschki	

Visual discrimination

Find the differences	
Love for ever	
Strong and beautiful	
Manga	
Letters and signs	
Sensitive foot	
Picture in picture	
Havredale students painting	
Graffiti	
Text collage	
Art	
Sole of foot	
Find the same	
Landscape	
Faces	

Door viewer	
Characters	
Characters–truncated	
One picture is missing	
Bike	
Ornaments	
Graffiti	
Wedding	
Body impressions	
Joint the dots	
Figure 1	
Figure 2	
Figure 3	
Figure 4	
Figure 5	

Visual sequence

Driving	
Trees 1	
Trees 2	
Trees 3	
Advertising 1	
Advertising 2	
Pack one's bag	

Hieroglyphics	
Papyrus1	
Papyrus2	
Papyrus3	
Papyrus4	
Papyrus5	
Klingon	
mu'ghom 1	
mu'ghom 2	
mu'ghom 3	
mu'ghom 4	
mu'ghom 5	
To be continued	
Line 1	
Line 2	
Line 3	
Line 4	
Line 5	

Spatial position

Puzzle	
Industry nostalgia	
Evening mood	
Graffiti from Mexico	
Graffiti from Spain	

Machine	
Puzzle, rotated	
Hot-air balloon	
Art	
Impressions from Scottland	
Longing	
Beautiful and dangerous	
Lambada	
Board game	
Tangram	
Dinosaur	
Racer	
Camel	
Eagle	
Swan	

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