Digital Ageing

DIGITAL
AGEING
Train your brain

TRAINING/LEARNING GUIDE

Index

Short description of the project

Digital Ageing is an ambitious initiative, in which 6 partners from 5 different European countries (Spain, France, Lithuania, Cyprus and Germany) work together with a view to enhancing the digital skills of elderly individuals by training their brain in different spheres and boosting their confidence in the ability to learn new things.

The approach used in this project consists in designing a set of activities rooted in the theory of multiple intelligences. The theory of multiple intelligences, proposed by psychologist **Howard Gardner** in 1983, challenges the traditional view of intelligence as a single, general ability measurable by IQ tests. Instead, Gardner suggests that individuals possess a variety of intelligences, each representing different ways of processing information and solving problems. These intelligences reflect diverse human capabilities and ways of learning, recognizing that people excel in different areas.

For this project, we have selected 4 types of intelligence that are closely related to digital literacy. Those are Verbal-Linguistic, Numerical, Spatial and Musical intelligence.
We conducted a preliminary research and focus groups with experts in Psychology and education, as well as with the elderly people themselves, to identify key points to be taken into consideration when elaborating the toolkit. Based on that, we designed twelve activities aimed at boosting each of the four mentioned types of intelligence in elderly people. Final versions of the tools are uploaded on the project website https://www.digital-ageing.eu/ in English and in all partner languages. There you can find detailed instructions on how to implement those activities. Some of the activities have interactive formats, which makes the learning process even more engaging.

Apart from that, we have also elaborated and constantly updated a Learning platform, Moodle. There the activities can also be found, as well as pre- and post-self assessment. For each Work Package, corresponding to each intelligence, we have also created a video, summarising the main features of each intelligence. Videos can be found on both the website and Moodle platform.

A special added value for each Work Package are our interviews with experts in Multiple intelligence, in which they explain the necessity of their training for the elderly people. The team of experts, as well as our consortium, is diverse and international - we have a neuropsychologist from Cyprus, a psychologist from Lithuania, an educational psychologist from Spain, as well as from Germany. With their support, as well as with the enthusiasm of the senior participants, we have developed this project. We expect our materials to be useful in the work with the elderly beyond the timespan of the project, and have elaborated this guide to facilitate practical information and tips to those eager to implement the products of this project in their daily practice.

Short summary of each intelligence addressed in the project

01

Verbal-linguistic intelligence

Verbal-linguistic intelligence is one of the types of intelligence identified in Howard Gardner's theory of multiple intelligences. It refers to the ability to effectively use words, language, and writing. People with strong verbal intelligence are skilled at reading, writing, storytelling, and articulating thoughts clearly. They tend to enjoy word games, have a strong memory for names and dates, and are good at learning through spoken and written language.

This type of intelligence is beneficial in fields that require strong communication skills, such as writing, teaching, law, and public speaking. For learning purposes, verbal-linguistic individuals thrive in environments where they can use language to understand and express ideas, making reading materials, discussions, and written exercises ideal methods for learning.

Verbal intelligence training is crucial for digital literacy improvement. Among other things, people with strong verbal intelligence can easily comprehend written instructions, which is crucial for understanding how to use new digital tools and platforms. Whether it's reading guides, FAQs, or tutorial text on apps, people with strong verbal intelligence can quickly grasp complex steps and instructions.

02

Numerical intelligence

Numerical intelligence, often associated with logical-mathematical intelligence as described in Howard Gardner's theory of multiple intelligences, refers to the ability to work effectively with numbers, patterns, and logical reasoning. People with strong numerical intelligence excel in activities involving problem-solving, quantitative analysis, and abstract thinking. They also understand numerical data, calculations, and quantitative concepts, and perform mental arithmetic or complex mathematical operations with ease. They are strong at logical reasoning and abstract thinking. High numerical intelligence goes along with good problem-solving skills. According to multiple research, there is a strong link between numerical intelligence and digital literacy. Numerical intelligence helps users analyse visualisations, such as graphs, charts, and statistics, effectively. In addition, as many digital tools and technologies, such as search engines, are driven by algorithms, a numerically intelligent individual can grasp the underlying principles of these systems faster. Logical reasoning helps in assessing the credibility of digital information and recognizing patterns in misinformation.

03

Spatial intelligence

Spatial intelligence, refers to the ability to visualise, manipulate, and understand spatial relationships in both two-dimensional and three-dimensional spaces. It involves thinking in terms of shapes, patterns, and visual imagery. A person with high spatial intelligence has the capacity to imagine objects or scenarios in their mind, to mentally rotate, transform, or manipulate objects. They understand spatial relationships well and have a strong ability to navigate physical environments or virtual spaces. Very often, these people possess artistic and design thinking.

Spatial intelligence and digital literacy are interrelated, as spatial skills play a key role in navigating, creating, and interpreting digital environments. The overlap between these two domains enables individuals to use technology effectively and creatively, particularly in fields that require visual thinking and interaction with digital tools.

04

Musical intelligence

Musical intelligence refers to the capacity to perceive, appreciate, and produce music. It encompasses skills related to rhythm, pitch, melody, harmony, and the ability to recognize and create musical patterns. A person with high musical intelligence is sensitive to sound, its nuances, tones and rhythms. They are able to understand and reproduce complex rhythms, and have capacity for listening and analysing music. They are also aware of the emotional connection, how music influences emotions, and how thoughts and feelings can be expressed through it.

There is also a link between musical intelligence and digital literacy. Musical intelligence is increasingly integrated into education, benefiting both younger and older individuals by enhancing learning experiences. The parallels between creating music and coding underscore the cognitive skills shared between these activities, such as the need for precision and sequencing. Additionally, attentive music listening develops analytical abilities, which are crucial for navigating the complexities of the digital world. Thus, fostering musical intelligence can significantly contribute to both academic and digital proficiency across all ages. Moreover, engaging with digital music platforms, whether through streaming services or music apps, not only nurtures their musical abilities but also helps them become more comfortable with technology. By using devices like smartphones, tablets, and computers to explore their favourite music, the elderly gradually enhance both their digital skills and technological confidence.

Categorisation of activities, practical tips from testing

For each intelligence, we have developed a video with a description of its main features, examples of fields where you can develop professionally if you have a high level of a certain intelligence, suggestions for exercises to boost this intelligence. In addition, we have also elaborated a questionnaire which serves as a self-evaluation tool to identify a level of a certain intelligence that one possesses.
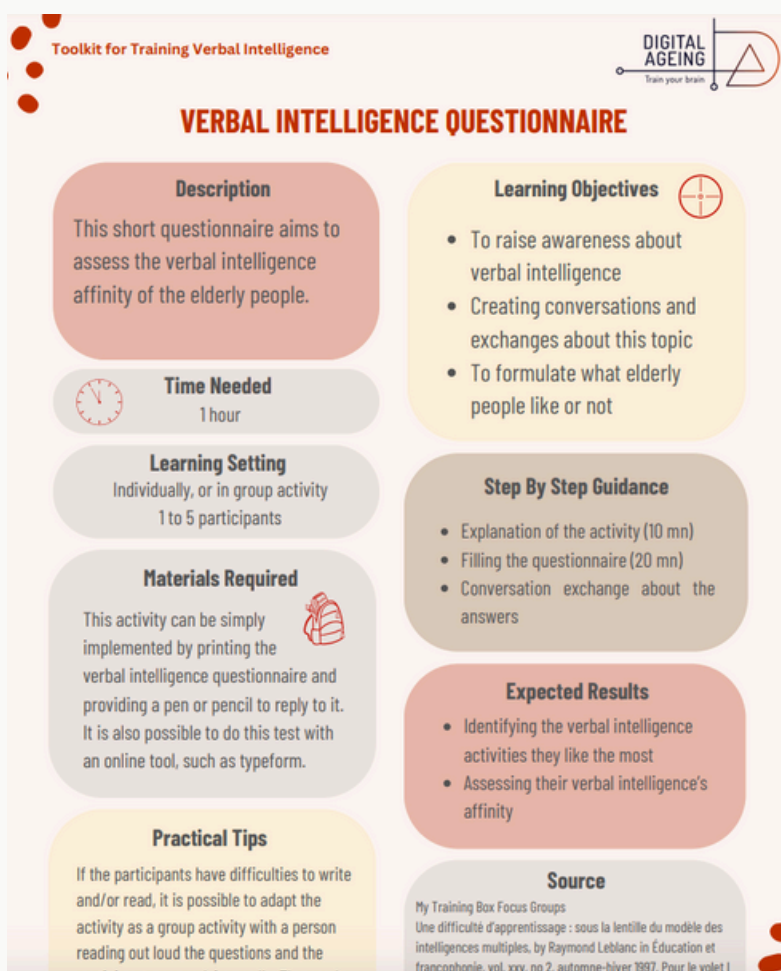
For all activities elaborated by the consortium we held a pilot session with the elderly people, and can now share recommendations and practical advice to provide for their smooth implementation.

- It is crucial to know the background of the participants. The activities are to be implemented with people who don't have any mental problems. Also, it is recommended to know in advance if there are people with sight or hearing problems, to adapt visual and oral instructions. Anyway, it is better to use big fonts, and the colour of the text has to contrast with the colour of the background.

- Repetitive instructions are often necessary. They have to be very clear and precise.

- If the activity takes place in a day centre or care home, it is recommended that a person with whom the seniors are familiar carry it out. If the seniors do the activities on their own in their homes, they might need to be assisted by their family members. The seniors will certainly need help with the activities, implementation of which needs technology.

- The elderly especially enjoy activities that recall events from their youth and relive emotions once experienced, for example, in relation to a famous song of their early adulthood.

- While our toolkit includes activities of different types, and some are intended for individual implementation, it is very important to foster the social component of the tools and conduct them in groups, when possible. Social interaction is always beneficial for the elderly.

Another important moment to be taken into account is that the cognitive abilities of each senior are different, and some activities will require grading levels and being adjusted to a certain person or group. For example, if there is a time limit for a certain activity implementation, it might be extended. Or providing easier tasks, for example, in case of mathematical problems to train numerical intelligence.

Seniors not only want to be kept busy, but also to be taken seriously as learners with their individual biography and experiences. It is important for them to understand the benefits of activities. In addition, they also want and ought to enjoy the activities.

This is an example of an activity:

Toolkit for Training Verbal Intelligence

VERBAL INTELLIGENCE QUESTIONNAIRE

Description

This short questionnaire aims to assess the verbal intelligence affinity of the elderly people.

Time Needed

1 hour

Learning Setting

Individually, or in group activity
1 to 5 participants

Materials Required

This activity can be simply implemented by printing the verbal intelligence questionnaire and providing a pen or pencil to reply to it. It is also possible to do this test with an online tool, such as typeform.

Practical Tips

If the participants have difficulties to write and/or read, it is possible to adapt the activity as a group activity with a person reading out loud the questions and the participants are replying orally. The results

Learning Objectives

- To raise awareness about verbal intelligence
- Creating conversations and exchanges about this topic
- To formulate what elderly people like or not

Step By Step Guidance

- Explanation of the activity (10 mn)
- Filling the questionnaire (20 mn)
- Conversation exchange about the answers

Expected Results

- Identifying the verbal intelligence activities they like the most
- Assessing their verbal intelligence's affinity

Source

My Training Box Focus Groups
Une difficulté d'apprentissage : sous la lentille du modèle des intelligences multiples, by Raymond Leblanc in Éducation et francophonie, vol. xxv, no 2, automne-hiver 1997. Pour le volet I

For your convenience and in order to facilitate your decision on which activities will be the most useful for the seniors you are working with, we have categorised the activities elaborated per intelligence, type and content of activity.

Co-funded by
the European Union

Activities aimed at training Verbal intelligence

To train this intelligence, we have elaborated different activities, that can be organised into the following types:

By nature of the activity:
1. Recalling words starting with a certain letter and belonging to a certain category: Word Categories, Same letter category.
2. Creating stories (often containing certain words, or starting with a particular word, or continuing the existing story): Finish the story, Word Bingo, Storytelling, Shared Memories
3. Working with words, their forms, modifications: Anagram, Word Chain, Find my Match.
4. Gap filling: Finding Digital Tools
5. Discussions on free topics: Group discussion.
6. Songs containing specific words: Sing on!

By activity type:
Group tools ONLY:
Sing on, Finish the story, Storytelling, Shared memories, Group Discussions.
Individual tools ONLY: no.
Tools that can be used both individually and in groups
Word category, Anagram, Word Bingo, Word Chain, Finding Digital tools, Find my match, Same letter Category.

By format:
Available for download: all of them
Available as interactive activity, as well:
Find my match, Finding digital tools, Sing on, Storytelling.

Specific recommendations based on the testing results:
- Sing on activity has some limitations: some people might not remember the lyrics of the songs.
- Activities triggering memories and emotions were especially well accepted (Storytelling, Shared Memories).
- Some activities, especially if done in a group and a time limit is set (Word categories, same letter category, Find my match), can be a chance to make the participants competitive, willing to win.

Activities aimed at training Numerical intelligence

The activities elaborated to train this type of intelligence can be organised into the following groups:

By nature of the activity:

1. Those that have something to do directly with maths operations: Solving Maths problems and puzzles,
2. Those that are more focused on logic and reasoning: Logical tables, Interpreting graphs, Find the pattern and follow the number sequence,
3. Applying Maths to real-life situations: Recipe planning challenge, My next week, trip Budget planning.
4. Games involving logic and operations with numbers: Maths board game, Solitaire, 31 cardgame, Number bingo, Sudoku, Numerical Memory recall.

By activity type:

Group tools ONLY: Maths board game, 31 cardgame
Individual tools ONLY: Solitaire, My next week.
Tools that can be used both individually and in groups: Find the pattern and follow the number sequence, Solving Maths problems and puzzles, Logical tables, Interpreting graphs, Recipe planning challenge, Number bingo, Sudoku, Numerical Memory recall

By format:

Available for download: all of them
Available as interactive activity, as well: Interpreting graphs, the Math challenges: solving math problems and puzzles, Find the pattern and follow the number sequence, Recipe Planning Challenge.

Specific recommendations based on the testing results:

- Activities should be graded. For example, certain maths problems may seem too difficult for some groups, then easier tasks should be provided.
- Tasks in which some maths operations are applied to real-life situations are most enjoyed - calculate amounts of ingredients for a recipe, budget for a shopping, trip, etc.
- Card games are also popular among elderly. In different countries the card packs are different, so it might be adjusted.
- Structuring information and interpreting visuals contributes to easier understanding of data.

Activities aimed at training Spatial intelligence

The activities elaborated to train this type of intelligence can be categorised in the following way:

By nature of the activity:
1. Drawing, painting, creating paper objects (activities that promote fine motor skills): 3D geometry drawing, Mandala Coloring, Origami Boats, Symmetrical Drawing.
2. Orientation in space and identifying things: Explore our world, Building a Memory Palace, Spot the detail, Pick up sticks, Optical illusions, Find the missing piece of the shape, Sorting shapes, Tactile Object arranging.

By activity type:
Group tools ONLY: Spot the detail, Pick up sticks, Sorting shapes, Tactile Object arranging.
Individual tools ONLY:
Tools that can be used both individually and in groups: Explore our world, Find the missing piece of the shape, 3D geometry drawing,
Individual with a follow-up in group: Building a Memory palace, Mandala coloring, Origami Boats, Symmetrical drawing, Optical illusions.

By format:
Available for download: all of them.
Available as interactive activity, as well: Find the missing piece of the shape, Optical illusions, Origami boats and Symmetrical drawing

Specific recommendations based on the testing results:
- Some activities need extra explanations and micro-teaching: Find the missing piece of the shape and 3d Geometry drawing. It is not very easy to grasp the concept of three-dimensional objects and missing shoes, so further explanations are needed.
- Drawing, coloring and paper crafts remind the seniors of their childhood, make them feel happy and nostalgic..
- Optical illusions activity offers a platform for further discussions of perception and psychological analysis.

Activities aimed at training Musical intelligence

By nature of the activity:

Identification of sounds, rhythms and melodies: Guess the song and sing along, Sing along and rhythmic drumming session, The sound film, Guess the dance, the Sound Charades, Sound chain symphony,

Knowledge of songs and singers: Musical bingo, Musical Hot Potato, My playlist.

Evoking emotions and imagination: Music listening and visualization, My musical autobiography, Memory lane.

Creation and Innovation: Write your own lyrics,

Dancing: Chair Groove.

By activity type:

Group tools ONLY: Musical Bingo, Guess the song and sing along, Sing along and Rhythmic Drumming session, Sound charades, Sound chain symphony, Musical hot potato,

Individual tools ONLY:

Tools that can be used both individually and in groups: Music listening and visualization, My musical autobiography, Guess the dance, Write your own lyrics, Memory Lane, Chair groove, My playlist,

By format:

Available for download: all of them.

Available as interactive activity, as well:

Specific recommendations based on the testing results:

- It is advisable to allocate enough time for activities related to music, especially those activities that draw an emotional connection with some memories/ life events. It makes the seniors feel nostalgic, and it is recommended to give them a chance to share memories.

- Seniors love to move to the music, so while implementing ones related to recognition of rhythms or melodies, some participants will just move to the rhythm, which is emotionally rewarding and physically beneficial for them.

Instructions on moodle course

For the purposes of the project, we have created a Moodle learning platform, incorporating all the learning content developed. Benefits of using Moodle include monitoring one's progress, picking up exactly where one left off, repeating exercises with result comparison.

In this chapter, we would like to give you detailed instructions and how to use this platform and get access to our training activities.

First of all, it is necessary to create an account on this website: https://v1.mygreentrainingbox.com/my/.

After clicking on "Sign up", you will have to tick boxes that you agree to Legal information and General Terms of use, and give the following details about you:
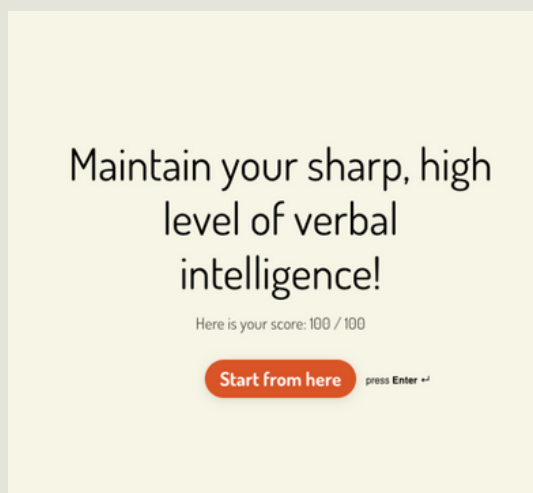

Then you will have to verify that you are not a robot, and you will receive an automatic email with further instructions to confirm the account and be able to start using the account.

Maintain your sharp, high level of verbal intelligence!

Here is your score: 100 / 100

Start from here press Enter ↵

Once inside the platform, you will see 4 modules corresponding to each intelligence. Their structures are identical. Let's take Verbal intelligence as an example. First, you are invited to test your verbal intelligence, completing a questionnaire. It is interactive and easy to follow. You will be asked questions about your abilities in the field of verbal intelligence, and automatically get your result.

Independently of your result, you will be invited to improve or maintain your level of verbal intelligence by means of some activities. First, you will be able to watch a video, summarizing the key aspects of verbal intelligence. Then, you are offered 12 different activities. It is not obligatory to complete them all, but the more you, the higher your chances of improving verbal intelligence are.

In post-assessment, you will be asked to mention which activities you have done and indicate if the activities have proved helpful to you, and in which way.

The structure of the modules in Numerical, Spatial, and Musical intelligence are identical. All the materials are available in English, Spanish, German, Greek, Lithuanian and French.

Also, each module of the learning platform developed by the consortium, has a section with links for extra materials in each partner language - for those who are interested in the topic and would like to deepen their knowledge in the area.

Project partners

DIGITAL AGEING
Train your brain

DSG consultores

Center for Social Innovation

Wisamar
Bildungsgesellschaft

SOCIALINIŲ INOVACIJŲ FONDAS

GrowthCoop
developing people

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