



MindLand

**Activity 2**

*Development and Integration of serious games and activities*

**Erasmus+ Programme**  
**Key Action 210: Small-scale Partnerships in Youth**



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the European Union**

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**MindLand: Mindfulness Intervention for self  
awareness in youth through serious games**

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**Activity 2: Development and Integration of serious games and activities**

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Task 2.1: Development of serious games and mindfulness activities

Task 2.2: Integration of various components



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## **I. Introduction**

The aim of the MindLand project is to develop a digital intervention that focuses on the cultivation of self awareness in youth, through mindfulness and serious games. Mindfulness training and the cultivation of self awareness can be considered a luxury for many young people, as in most European countries it is not offered in public education. More so for youth in refugee and immigrant communities, who would benefit by such as intervention as part of their social integration.

Digital solutions offer the opportunity of making mindfulness accessible to all individuals that have access to a computer or smart device, regardless of ethnicity, socio-economic status and geographical location, religion, abilities or gender.

The purpose of Activity 2 (Development and Integration of serious games and activities) is to develop the MindLand intervention in a digital form and integrate all of its components.

Therefore, in this report we will look at the process of development and integration of MindLand's different components.

## **II. Game Concept and Design**

After the consortium discussed the results of the user requirements survey conducted in Activity 1 and considering the scope and resources of the project, it was concluded that the most relevant topic that MindLand would focus on would be "Dealing with Uncertainty". Mindfulness For Life created the content for the topic, in the form of text, voiceovers, videos and meditation exercises.

During the kick-off meeting, the consortium brainstormed to create a concept for MindLand, concluding to the concept of having the human brain as a map when the user enters the digital intervention, and selecting the area of life that they want to work on. With each completed area, the path leading to that area would be coloured to show it has been completed. The brain map in its final form is shown in Figure 3.

It was also decided to have a narrative interactive format, where the user makes choices that determine the content they are presented with next. So each user would be presented with somewhat different content depending on their choices and interests. An early draft with some game concept ideas can be found in the Annex.

The concept was finalised by Technologos Research and Innovation Services after all the curriculum and exercises was provided by Mindfulness For Life.

### III. MindLand Components

In order to make the intervention more fun and engaging, a “guide” character called Uni was conceived, designed and animated to talk and meditate along with the user (Figures 1, 2).

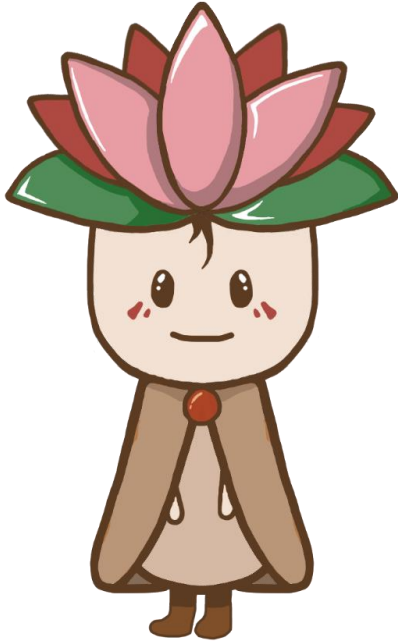


Figure 1 Uni Character (MindLand guide)

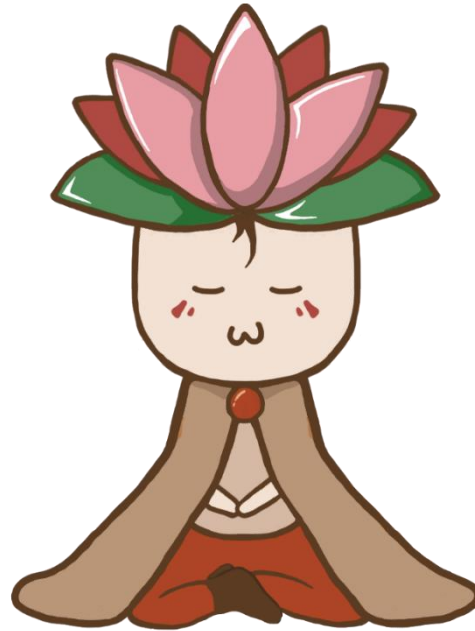


Figure 2 Uni character meditating

The brain-map concept that was decided during the kick-off meeting was designed and implemented as shown in Figure 3. The user can select one of the four areas of life that concern fears that could potentially happen to work on:

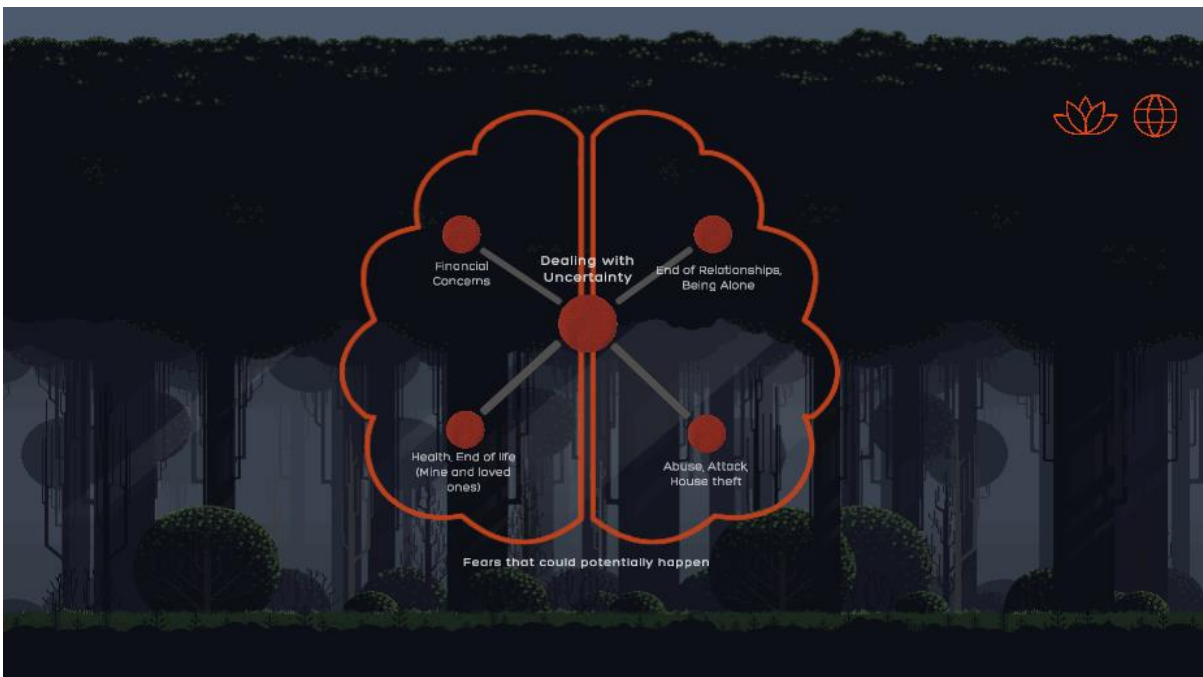


Figure 3 MindLand Brain Map

- a. Health, End of life (Mine and loved ones)
- b. Financial Concerns
- c. End of Relationships, Being Alone
- d. Abuse, Attack, House theft

In Figure 3, the MindLand Brain Map there are also two buttons, the Practices button, and the Language button.

The Practices button takes the user to a screen where they can see all the available meditations and practice at their own time, as shown in Figures 4 and 5.

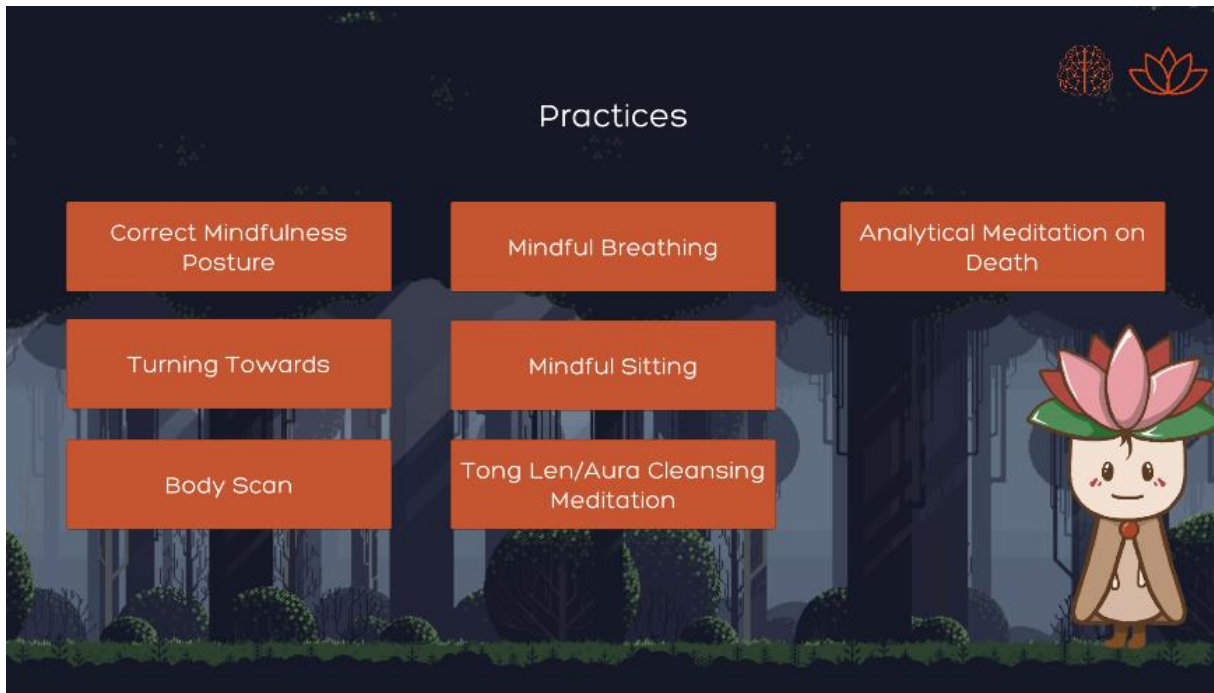


Figure 5 MindLand Meditations (Practices screen)

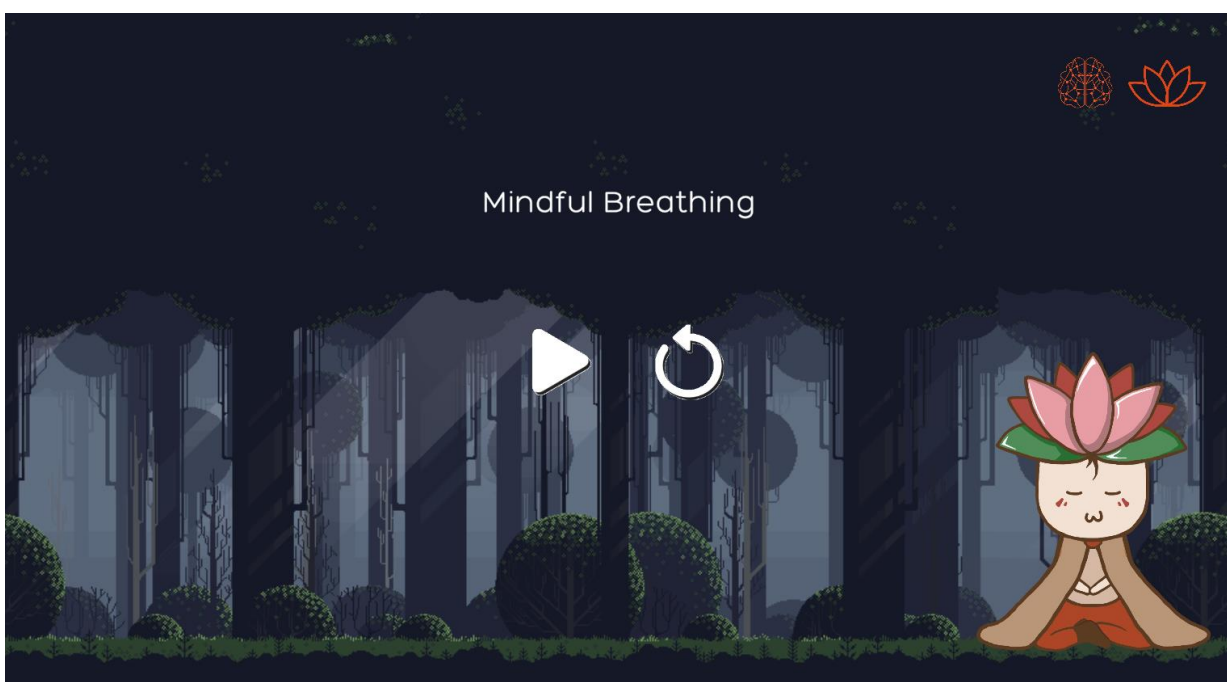


Figure 4 Practice Meditation screen

The Language button takes the user to a screen where they can select their preferred language between English, Ukrainian and Arabic, as shown in Figure 6. This screen is also the first screen with which the user is presented as soon as they open the application.



Figure 6 Language Selection screen

After the user selects their language, they are taken to the Introduction screen, shown in Figure 7, where there is a voice recording that introduces them to the MindLand application and its purpose. After they listen to the introduction, they are taken to the brain map where they can start their journey in MindLand.

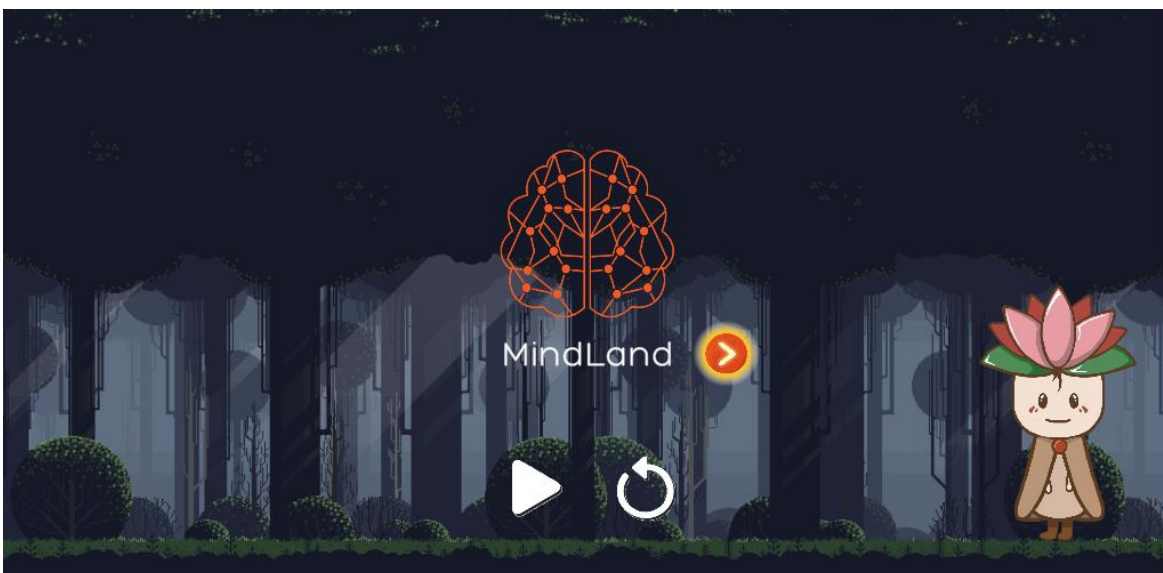


Figure 7 MindLand Introduction

The main content of the MindLand intervention is presented when the user clicks on one of the four areas of life (Figure 3). The content is presented sequentially in the following methods:



1. Text with voiceover (Figure 9): The voiceover covers the text and also offers additional information.



Figure 9 Text content with voiceover

2. Video with more insights and explanations about the content (Figure 8)

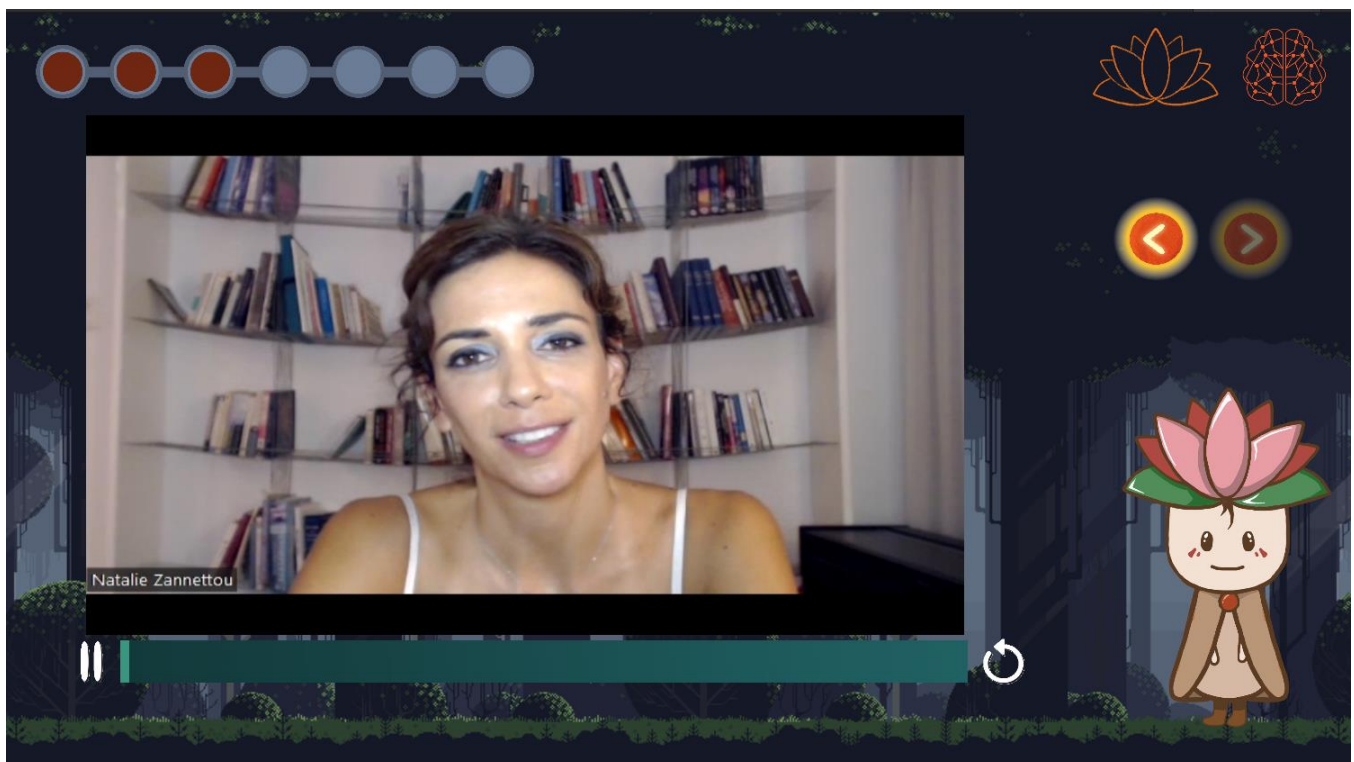


Figure 8 Video content

There are also interactive elements in the MindLand application:

1. Menu (Figure 10): The user chooses according to their interests and life situation and their choice affects which content is shown next.

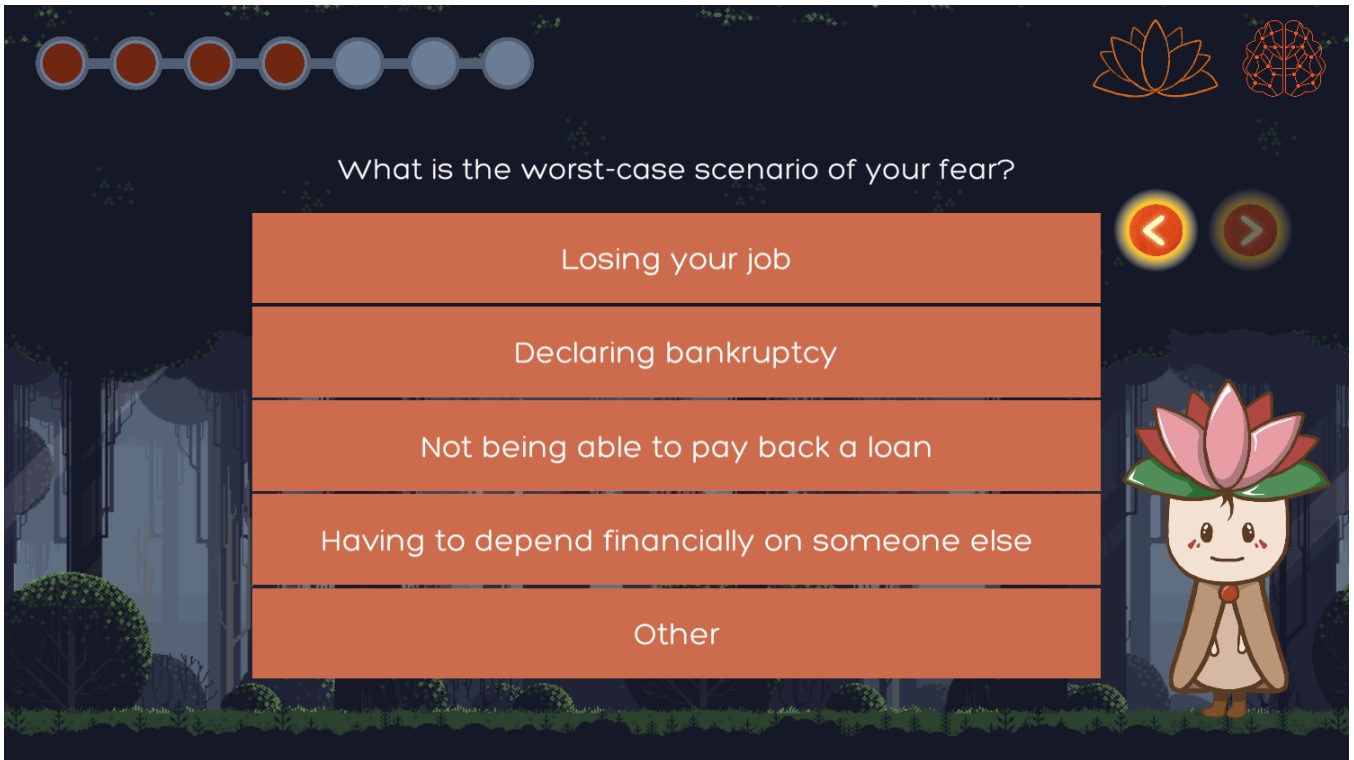


Figure 10 Choices Menu

2. Journal (Figure 11): The user is prompted to answer several questions related to the fear they are working on, and they are provided with a journal to take notes. The application lets the users know that it doesn't store or keep any of the information they provide.



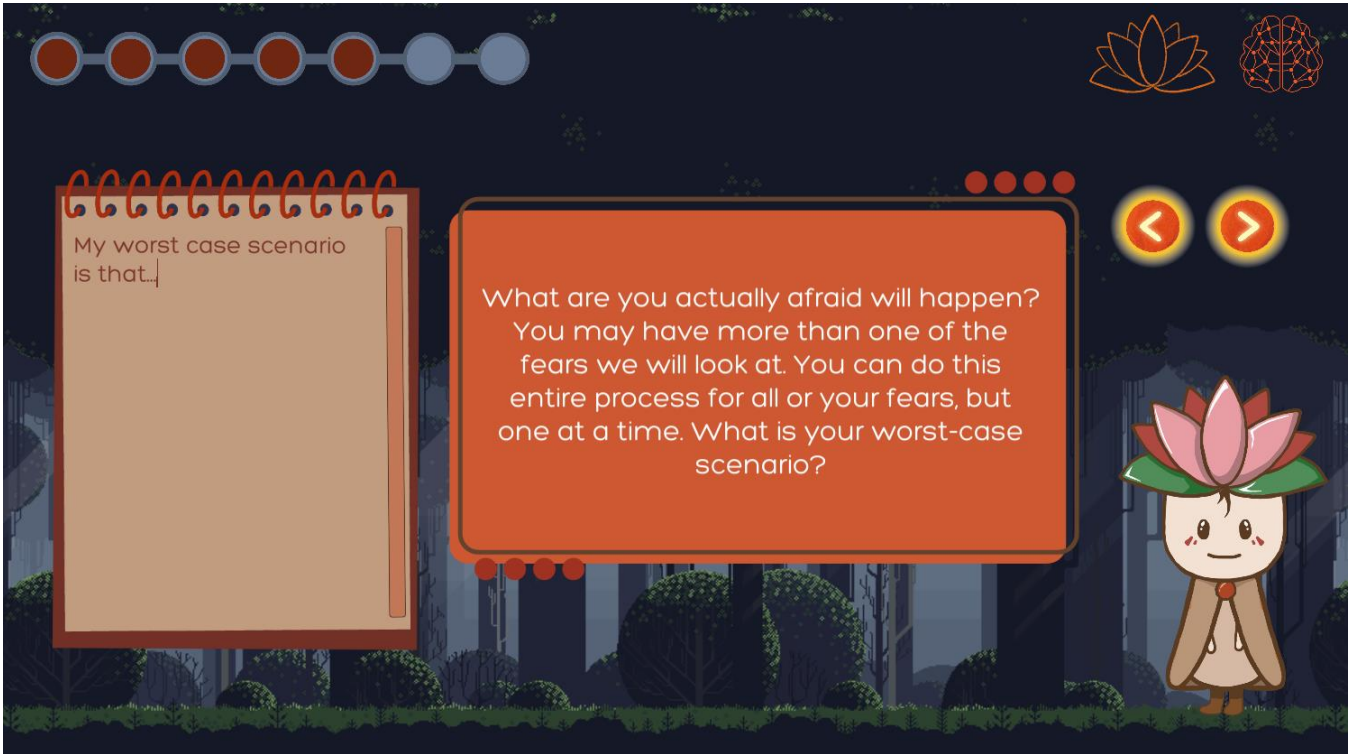


Figure 11 Journal for answering questions

3. Practices (Figure 12): At various points throughout the process, specific meditations that are relevant to the material the user is going through at the time are presented for them to try out.

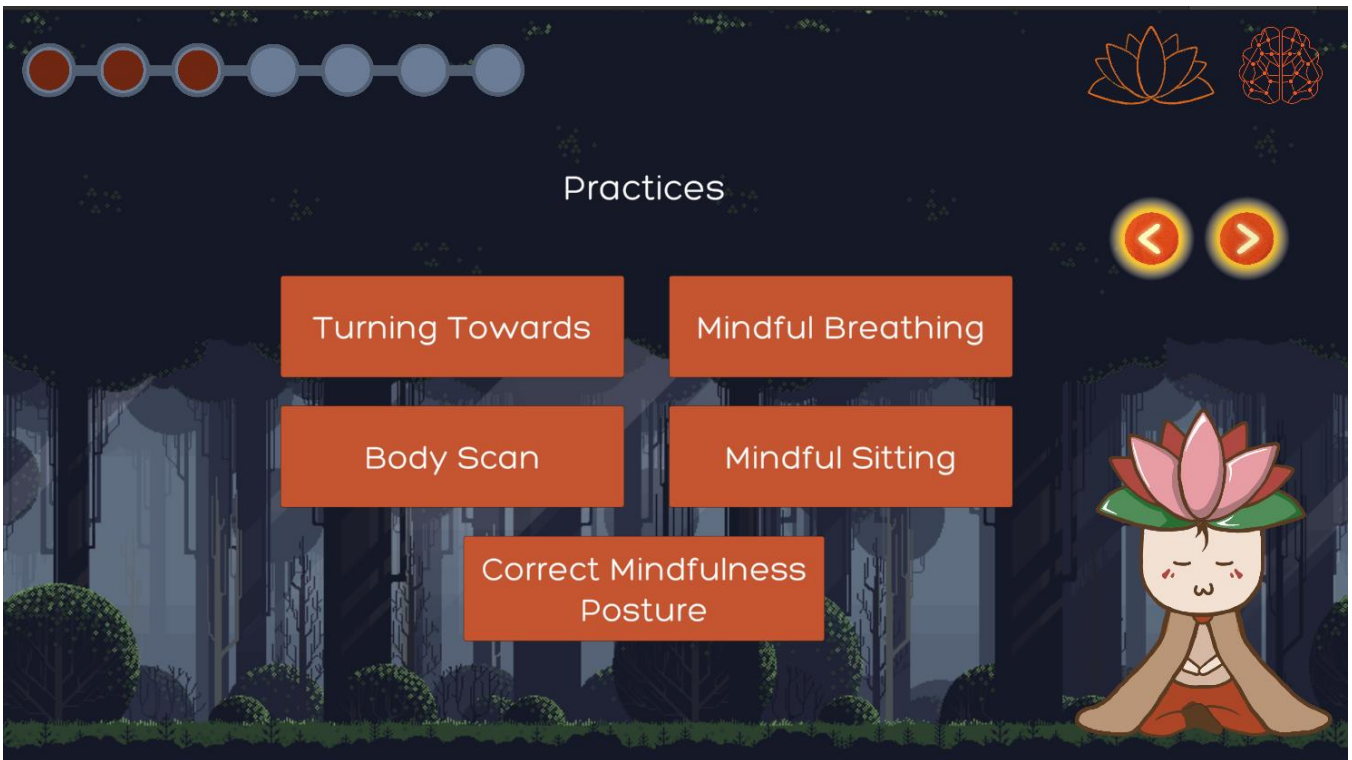


Figure 12 Practices during the intervention

The user can see their progress in a specific area by looking at the circles at the top left (seen in all the previous figures). This helps them to know how much of the process they have completed so far.

Part of the narrative paths that are determined by the different choices the user can make are shown in the form of a flowchart in Figure 13.

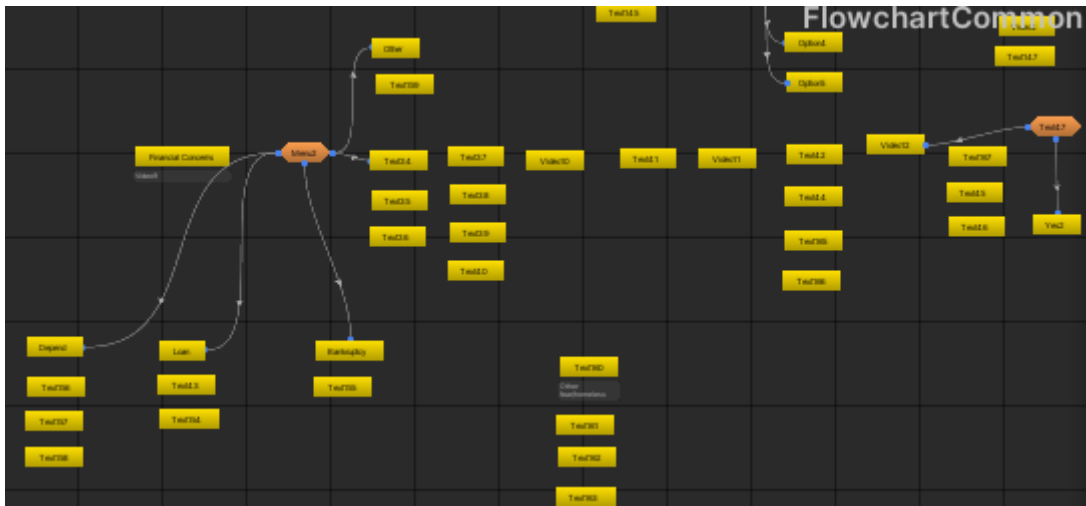


Figure 13 MindLand flowchart for narrative choices

## IV. Integration

Accessibility was an important aspect in deciding how the intervention would be designed, and for which devices, so that regardless of socioeconomic background, all youth with access to a smartphone or a computer would be able to use MindLand. The user requirements survey results from Activity 1 indicated that most youth use an android smartphone and most of them also use a laptop or computer often. Therefore it was decided to design MindLand in the form of an android application, but if resources permitted also to make it available online on a web page so that anyone who doesn't have an android device can use it. It was also decided to use 2D graphics instead of 3D graphics, so that low end devices can also support the application.

The videos, voiceover recordings and meditation recordings for all languages were uploaded in an Amazon S3 bucket so that the application is not overloaded due to the large files. The files are downloaded in real time while the user is using the intervention.

The android application was tested across different devices (smartphones and tablets) and was released in the Google Play Store (Figure 14).



MindLand

## Activity 2

## Development and Integration of serious games and activities

Google Play Games Apps Movies Children

# MindLand

Technologos Research and Innovation Services

10+ Downloads | PEGI 3

Install on more devices

This app is available for all of your devices | You can share this with your family [Learn more about Family Library](#)

**Mindful Breathing**

What's new  
MindLand Release 8.

**Developer contact**

**More apps to try**

- 2248 - Number Puzzle Games  
Inspired Square FZE  
4.8 ★
- Flashcards World  
Andev  
4.7 ★
- Chess - Play and Learn  
Chess.com  
4.7 ★
- Simpler: Learn English fast

Figure 14 MindLand on Google Play Store

A web version (WebGL) was also built and uploaded on MindLand's website, for people who do not have access to an android device (Figure 15). Therefore, the consortium achieved full coverage in terms of access by the participants.

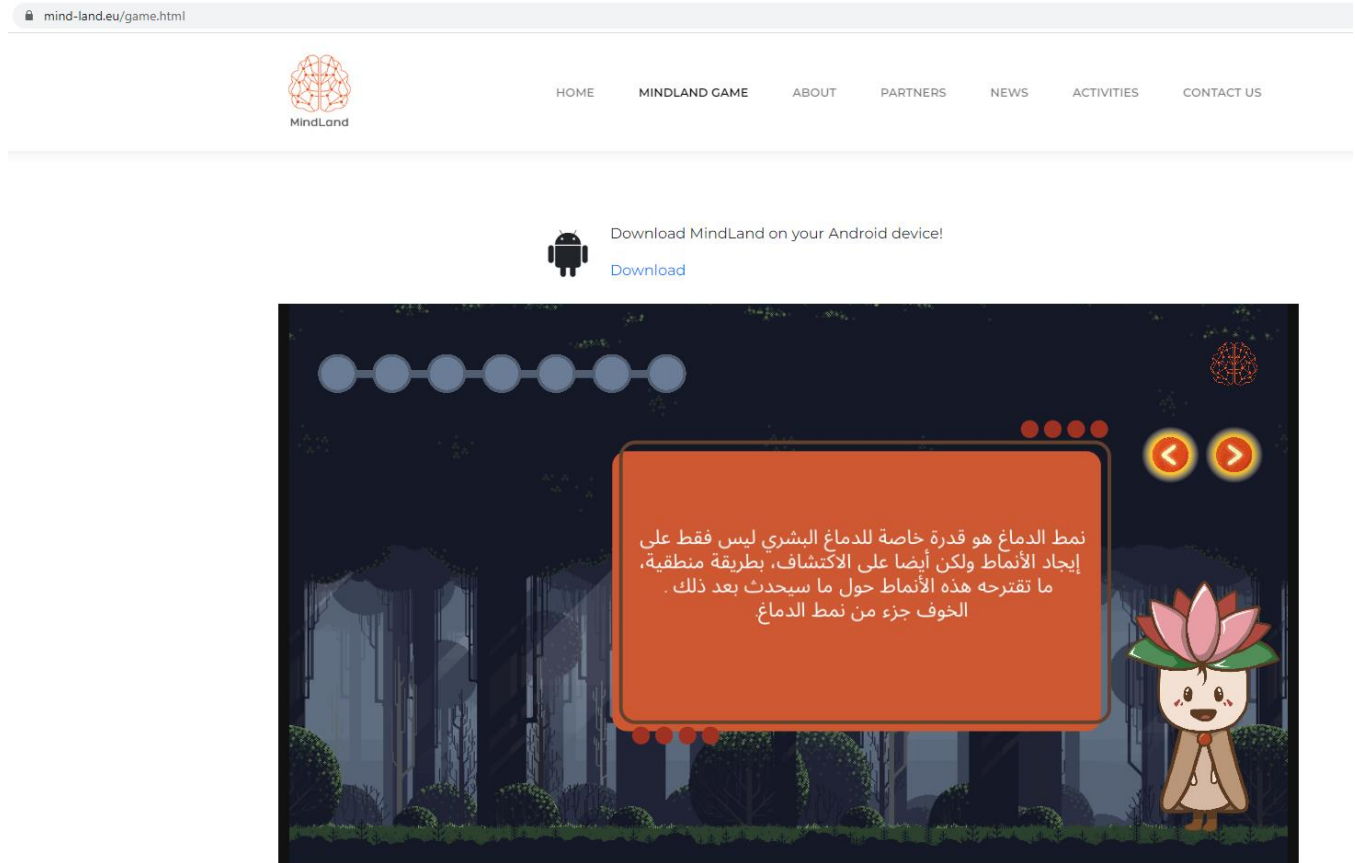


Figure 15 Web version on MindLand's website

## V. Technologies and Tools

In the development of the MindLand intervention, the following technologies and tools were used:

**Unity:** Development of the intervention

**Fungus Games:** Library in Unity for narrative management and user choices

**Krita:** Character design

**Canva:** Assets design

**Amazon S3:** Assets and file storage

The background artwork was designed by Eder Muniz.

## VI. Annex

### Game Concept Brainstorming

In this topic, we have a lot of videos and more importantly questions that the player will have to ask themselves and take note of their answers.

#### Ideas:

Overall concepts: Navigation, paths, branches, We need a journal-type interface for the player to write answers

1. Platformer-like game: player navigates and finds a different character/sage every time that asks them a different question and gives them the text material. Stone-like pillars that when you click on them you get a video.
2. Player is on a tree and follows the different branches, and as they complete the subcategory the corresponding branch blooms. They can see an overall view of the tree with which branches they have completed.  
The whole topic could be a tree. They start from the ground and the camera pans upwards as they progress. There would be one tree for each combination (one tree for uncertainty - health , where one branch is death in general (with all the videos and exercises), one branch is illness of self, other the illness of someone else. Different tree/plant for financial and so on.
3. Static with a background. Player presses a button to continue to the next step. Text material appears in a text box. Simple sequential presentation of the material.
4. Static with different characters appearing on the side to offer the text as in a dialogue. The character sits when meditating, video that talks about posture. Extra gamification for static options: Give a reward to the player every time they complete something, e.g. different brain parts, a different plant for them to build a garden.
5. Gamification by presenting the material in different ways that are more engaging (e.g. with visuals)

*The users will be able to explore activities in both online and offline settings, thus encouraging the use of digital tools as facilitators in developing real life competencies, and not merely as another distraction.*

Add a button on the menu that will give you a daily task to do offline, with special reward.

Unlock more practices as you complete the material.

#### Screens:

1. MindLand welcoming screen (logo, maybe enter button, or just brief animation with logo)
2. Home Screen: Brain Map. Bottom menu: Map, Archive (if more than one topic), Daily Task

#### Archive

- What information (from the material or info that the player has entered will we present to them to be able to review at the end?)
- Will the player be able to save their progress at any point in the game? That means different saves for each subcategory

The first time the player attempts a topic combination, the order of the material and exercises will be exactly as described in the Material document.

After the first time, we need an easy and accessible way to present the material and exercises.

#### Choices:

- The player navigates to the topic/subcategory they want by > selecting topic and category on the brain map > seeing the whole tree and selecting the subcategory they want > seeing a list of titles of the videos/exercises, a categorisation of what has been done for that topic