



Engaging Physiotherapists and gymnasts in the digital performance of their profession for distance guidance in physical exercise

REBALANCE Project

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# REBALANCE INSTRUCTIONAL METHODOLOGY

R1/A2

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## Executive Summary

Work is a significant part of our life since we spend at least 1/3 of our day. The Covid-19 outbreak brought an immediate change in our work style and many people were forced to work permanently from home. Within the work from home concept, people exaggerating working hours reduce their movement and the balance of their physical activity. The limited physical activity and the non-ergonomic equipment worsen the body structure, and continuous aches in the back, neck, knees, and hands appear more recently.

The COVID-19 restrictions brought in place the home fitness concept due to convenience and safety. These activities are based either on videos or fitness apps without the personalised guidance from professionals that can encounter the existing musculoskeletal problems of the user. This is a current challenge that appeared for professionals such as physiotherapists and trainers since they cannot assure that their guidance to their patients or clients would be enough to ensure that the execution of these activities would be successful at home without harming themselves.

Physiotherapists and trainers can provide their services in real-time. When instructing clients from a distance, they may lack the technical skills and knowledge to effectively guide them and ensure that their end practitioners do not harm themselves.

The Rebalance project aims to solve these problems by identifying the following needs:

- The need to enhance training on performing physical exercises in circumstances when a physiotherapist or trainer is not available in real-time, using digital methods.
- The need for physiotherapists and trainers to improve their services by implementing digital solutions that allow them to provide individualised assistance to their patients/clients, even if they can't teach them in real-time.
- To increase awareness about the negative effects of long periods of sitting on one's physical structure and health.

To meet the detailed requirements, we want to develop an accessible online solution improving the conditions in which physiotherapists and trainers may guide persons from a distance without having to deal with generic training apps. Professionals who take part in our program will learn how to use new technologies in their industry, develop their digital abilities, and receive a final, free-to-use product to operate in their daily activities.

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## 1. Introduction

This document is the common training methodology developed for the REBALANCE project. The methodology is destined for physiotherapists and sports trainers interested in providing their services from a distance (consultation, patient check-in, physical exercise).

### 1.1 Scope

To set up the basis for the development of the educational programme and material, partners conducted research through anonymous surveys and structured interviews with representatives of our target audience in each respective country.

The research was based on preliminary desk research in the pre-application phase and public surveys, to structure the questionnaires used.

The overall report provided a clear view of the needs of our target groups.

### 1.2 Target group

Target groups involved in the Needs Validation phase:

- Physiotherapists
- Sports Trainers
- Coaches
- VET educators in the sectors of project interest

### 1.3 Needs identified

- More options/ technologies to use in distant guidance apart from teleconference platforms
- More Education in using new technologies.
- More support
- Solutions and ideas for sessions 60 min and 45 min
- Content for Physio & Sports Combination for patients with pains related to sedentary lifestyle
- Solutions when presence of the professionals is not possible
- Top 3 3 services they reached for a digital solution were Evaluation of condition, Physical Training and Stretching
- Motivation practices in distance guidance and feedback processes
- Data protection regulations and practices
- Education of clients on the use of digital technologies
- Combination of in person and digital practice

### 1.4 Identified benefits in digital practices

- Increased accessibility when there is no transportation or too long distances/ hard to leave home / client wants therapist from further away.
- It also minimizes travelling (both client and therapist), time and costs and is an ecological option for rehabilitation.
- A wider client population for therapist was also achieved.
- The benefits were more specific, if the target group was well identified; it increased effectiveness and subjective benefit of the clients.
- ergonomic instructions were easy to guide for the client, sometimes using the materials they had at home like ironing boards, cardboard boxes etc.

## 2. Instructional Methodology

Taking into consideration the identified needs, we aim to create an OER educational methodology to help the professionals of the target group improve their services and actively include digital practices in combination with their “in presence” services.

The training course will use self-paced e-learning, with an option for a trainer’s assistance.

It has as objectives to provide:

- the required theoretical knowledge to the users
- examples of practices
- self-assessment and knowledge validation.

The duration of the training can be settled according to the timeline set by the user. It varies from 6 weeks up to a year depending on the availability of the user. The optimal duration of each training module should be 5 hours, with the option to be extended if the module is important or has more information.

Each module will end with a self-assessment questionnaire for evaluating what the participant has learned.

Each module will include indicatively the following:

- theory & additional resources (videos, articles, etc.)
- examples/good practices (if possible, at least one per module) & practical recommendations
- self-assessment via quizzes

The self-assessment tools will be developed after the theoretical part is complete. They will be based on the training content and will serve as an important measure for learners’ knowledge acquisition, their interests and further personal development guidelines.

A predefined grading system will support the motivation in learning by the user and the validation of the acquired knowledge.

The course will be hosted in a Learning Motivation Environment with a self-registration option for the users. The theory and additional resources will be presented as interactive presentations while the good practices will be presented as downloadable materials. The quizzes will be integrated into the platform.

## 3. Thematic Modules

The theory developed should take into consideration:

- The combination of Physiotherapy and Physical Exercise
- The focus in Musculoskeletal problems basically linked to sedentary lifestyle and non-ergonomic equipment.
- The digital practice in combination with face-to-face evaluation and sessions

Module 1 Theory: Physiotherapy and Sports/ Combination of practices

- Background
- Trends
- Benefits
- Points to keep an eye on
- Ideas for combination of physiotherapy with physical exercises
- Benefits for Musculoskeletal conditions and sedentary lifestyle

## Module 1 Best Practices

## Module 2 Theory: Digital Practices in Physiotherapy and Sports Training

- Technologies used in distant guidance.
- AR technology in these fields
- Training sessions
- Appropriate smart applications and web platforms
- Factors to consider.

## Module 2 Best Practices/ Case Studies

## Module 3: How to train your clients in the digital performance.

- In person evaluation
- Training of the client in the applied technology
- Step by step digital transition
- Feedback practices before/ during and after the practice

## Module 3 Best Practices/ Case Studies

## Module 4: Accessibility for people with disabilities

- Accessibility of Information shared.
- Access information on website
- Accessible routes to visit the space and accessible space.

## Module 4 Best Practices/ Case Studies

## Module 5: Data protection in digital practices of Physiotherapists and Sport Trainers

- Application of the Health history related privacies.
- Storing of information
- GDPR applications
- National and EU practices
- Paradigms of platforms and their data storing and sharing.

## Module 5 Best Practices/ Case Studies

## 4. Piloting Activities

After the finalization of the English version partners will internally test the educational platform. After the internal testing and the translation of the content, the partners will recruit participants for external piloting of the tool. Around 10-15 participants per organisation contribute to the Pilot phase.

## 5. Knowledge Validation

Users will be awarded with a certificate and/or open badge automatically issued by the e-learning platform at the end of the course based on the score of self-assessment tests and accomplishment of activities (going through the learning materials, submission of assignments, etc.).

It will be obligatory to read the theoretical part and achieve a grade of 70% of completion as minimum in the quizzes. More details will be analysed in the Micro credentials Documents.

## 6. Suggested course guidelines

### General recommendations

#### Referencing

To ensure consistency across all modules, please use the APA Format Citation style (APA 7th edition) of in-text citation throughout the module (if you introduce new references) but use hidden text.

#### Copyright

Make sure you make it clear and only share materials that are open.

A Creative Common license is suggested for course contents, specifically the BY-NC-SA licensing (Attribution-NonCommercial-ShareAlike - this license lets others remix, adapt, and build upon your work non-commercially, as long as they credit you and license their new creations under the identical terms)

#### Images

- Make sure you have the right to use any images you include, and they are correctly referenced.
- If the images contain some vital information, then you need to provide an editable version for translation.
- If you include figures, tables or annexes in the training module, then use numbers in their legend and add a list of them at the beginning of the module (contents table).

#### Learning

Structure the training material to engage our learners as much as possible. The lesson should be constructed as a series of activities a learner has to work through, all of which map to the learning outcomes for the lesson as a whole.

Furthermore:

1. Use high quality resources from reputable sources
2. Use quotations, graphics, case studies and figures to illustrate material. They provide the student with an opportunity to create a personal understanding of the topic.
3. Use learning activities that generate relationships between what the learner sees, hears, or reads and their retention of this material (e.g. learning tasks, demonstrations, metaphors, analogies, examples, open-ended questions, interpretations and inferences).
4. Use key points to highlight the main learning points in each module. These key points summarise the module at various stages. They are not a comprehensive summary or conclusion to the entire module, but a brief reminder to students of the main points covered.
5. Highlight in bold all the important definitions and terminology. We may consider the creation of a dictionary of key terms at the beginning or at the end of the module with bookmarks.
6. Hyperlinks/URLs: Addresses to relevant and established websites should be provided for further research and reading. Hyperlinks to videos (YouTube, TedTalks), podcasts, newspaper articles, government agency resources. Note that this content is most commonly in English so it should come as additional inspiration material, but not main teaching resource. Choose short videos with simple language that have already some subtitles (even only in English) and the option for automatic translation. Also note that external links and videos can be removed even before the end of the project. Therefore, don't forget to mention that additional resources are complementing the content and at the time of content creation they were working correctly.

#### Style guidelines

1. Please apply the following specifications:
2. Address the reader as 'you', or the equivalent polite form in each specific language
3. Refer to the reader as 'the learner'
4. Aim for an average of no more than 20 words per sentence
5. Avoid the use of jargon words. As a general rule of thumb, material should be written in a lighter style than those found in textbooks.
6. Avoid long, dense paragraphs of text.
7. Use headings and sub-headings as appropriate to avoid lengthy paragraphs.
8. Assume that the learner has no knowledge or minimal knowledge of the topic. When academic language or new terminology is introduced, use footnotes or similar features to explain terms.
9. Follow the template for headings and body text, provided by Emphasys

## Course Languages

The Training Materials and Course will be available in:

- English
- Dutch
- Finnish
- Greek
- Lithuanian
- Portuguese