



*Dem@entoring*



## **DEM@ENTORING**

**Live and learn – Innovative  
ICT based learning and  
mentoring approaches for  
Alzheimer's communities**

ERASMUS+ KA2 (2018)  
2018-1-EL01-KA204-047898

# **Design & Development of DEM@ENTORING platform and training material**

## **INTELLECTUAL OUTPUT 3 (IO3)**

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## 2 Executive Summary

The core outcome of Intellectual Output 3 (IO3) was to develop the whole DEM@ENTORING ecosystem (a holistic platform combining the educational part as well as the Mentor/Mentee Collaboration environment), taking into account the feedback and outcomes from IO1 and IO2, the Mentoring Lifecycle Model introduced in IO5 and finally the technological competence in the form of tools and components brought in by INNOSYSTEMS.

The DEM@ENTORING online ecosystem has harmoniously combined and integrated all the proposed technological advances with the outcomes and results of the project, to produce an exploitable solution, which is considered as one of the core deliverables of the project. An online system with train-based information, advanced interaction possibilities, collaborative communication tools, action points, models and methodologies, training material etc. allowing patients & caregivers, professionals, stakeholders etc. to actively and constructively interact and reach desired outcomes and goals.

Due to the importance of this IO, its execution was planned through three different phases allowing us to produce an early, a beta version and a final that has been tested and enriched in a second and third iteration in order to have a final prototype.

Following the user centre approach as mentioned also is IO1 as well as agile methodologies, throughout the development process user acceptance studies were conducted in order to get feedback on the “look and feel” and the usability of the system. This also involved the support provision during the pilot phase.

The document at hand is the final version of the respective deliverable “IO3: Design & Development of DEM@ENTORING platform and training material” which has been concluded at the end of the project (May 2021) according to updated work plan.



### **Leading Partner**

INNOSYSTEMS M.IKE. (INNO)

### **Authors**

Charalampos Vassiliou, Computer Scientist, Technician, INNOSYSTEMS M.IKE. (INNO), Greece  
Iliana Korma, Researcher, INNOSYSTEMS M.IKE. (INNO), Greece  
Vaios Kouvelis, Lead Developer, Technician, INNOSYSTEMS M.IKE. (INNO), Greece

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### 3 Introduction

Dementia affects 58 million people worldwide, and the forecasts indicate that this number will be three times higher by 2050 [1]. One of the foremost and striking symptoms of dementia is cognitive impairment [2], but people with dementia also have problems with concentration, orientation, finding the right words, and planning. They may be prone to rapid mood changes, and they may suffer from depressive symptoms or apathy and exhibit signs of aggression against other people, especially their loved ones [3, 4]. These symptoms generally worsen over time, and people with dementia lose their capability of performing tasks of daily life. Therefore, they are necessarily reliant on the help of other people, in most cases, on their relatives, who become their caregivers [5].

There is a current tendency to shift institutional care to community care [6]. Informal care heavily depends on the help of family members, and the percentage of these informal caregivers has reached 80%. However, the assistance of informal caregivers generally results in a worsening their quality of life [8]. Informal caregivers generally spend between five and 20 h per day taking care of family members with dementia [9]. Informal caregivers, like formal caregivers, also suffer from a gradually increasing physical, mental and economic burden [10–12]. Therefore, there is an urgent need and effort to alleviate this burden for informal caregivers and provide them with some professional help. Technology may be one solution. The World Health Organization supports this initiative and finds it urgent to seek different ways of providing support to people who take care of individuals with dementia [13].

Technology is ubiquitous, and it penetrates all spheres of human life, including education, where information and communication technologies (ICT) are used in electronic education (i.e., e-learning), which is particularly used for distant education and as a support to traditional, face-to-face teaching for full-time students. E-learning is learner-centred to develop the student's autonomy and independence while learning and make him/her responsible for his/her learning while providing him/her with needed skills and strategies for learning. Students can use it at any place and time and collaborate with other students. Learning has also become more interactive [14].

E-learning is primarily used as a component of traditional, face-to-face classes. This combined form of learning is called blended learning (BL), and it is widely used in healthcare in developed countries. L'Engle, Raney, & D'Adamo [15] claimed that e-learning enhanced provisions of health care and its services worldwide, and it enabled its delivery to remote regions and developing countries in particular.

Nine Lanterns [16] found that the use of e-learning in health care was primarily suitable for the training of future healthcare professionals in different regions and countries, and it was more cost-effective. The findings of their survey showed that 95% of subjects used online courses, and 80% used them as support for their face-to-face classes. Other research indicated the significance of the role of e-learning in knowledge retention, the understanding of particular health issues, continuous education, and the educating of future healthcare professionals [17–20]. Recent trends illustrate that e-learning courses also play important roles in inter-professional education and collaboration [21, 22]. E-learning courses may enhance interprofessional care in the sense of improved communication between healthcare staff and achieving desirable outcomes for people [23]. In case of informal caregivers, Official healthcare organizations, such as the Alzheimer's Association, municipalities or healthcare staff, generally distribute e-learning programs [24]. These programs are mostly available for free or at reasonable cost, as in the case of iCare Stress Management e-Training Program, which focuses on reducing stress and depression of family caregivers [25].

The DEM@ENTORING ecosystem, aspires at becoming a holistic platform combining the educational concept of an e-Learning platform for formal and informal caregivers in the area of dementia, as well as an innovative Mentor/Mentee Collaboration environment bringing together interested stakeholders for the promotion and knowledge-transfer in all aspects of dementia.



The DEM@ENTORING ecosystem supports the establishment of mid to long term relationships with experienced professionals who are keen on sharing their expertise and general experience in various sectors and subsectors of dementia, focusing in social care and caregivers. The proposed DEM@ENTORING mentoring scheme may support aspects of general healthcare knowledge transfer, caregiving planning and guidance, networking and professional contacts, or specific problem-solving for formal and informal caregivers, thus alleviating the burden for caregivers and provide them with some professional help. To optimize matching results, protocols have been established thus providing appropriate matching between caregivers and mentors in order to avoid useless or stressful mismatches and ensure successful mentoring efforts.

The main objectives of IO3 are primarily threefold:

- **Task 1 – The establishment of the DEM@ENTORING Platform:** An Open Source Learning Platform has been implemented as the core of the DEM@ENTORING online ecosystem. The design and development of the platform which provides the tools, training, mentoring and pairing, in diverse forms on-line as well as the project's e-environment's services and content has been created. This part of IO3 has developed the environment & integrated all tools in order for the target group pilot users to test it. The main outcomes have been to create the multilingual learning management system, the multilingual OERs, good practice material & user guidelines, establishment of a communication area, a trainer area with results, practical information, scenarios based on event summaries, such as the trainers guide and the pedagogical methodology of training, user manuals, contact information, event information, etc. The platform is considered user friendly, with gamification elements to suit mentors & caregivers' profiles and expected features, as well as functionality to facilitate interaction and communication (user control), and allow participants to interact with other users.
- **Task 2 - Content Creation:** Development of interactive OERs based on the outcomes of IO2 and on the needs identified and addressed. A webinar has been organized, delivered and recorded and uploaded online for training purposes. OERs have been based on HTML5 and H5P for easy viewing as well as responsive for access through multiple devices. IO5 which represents "The Mentoring Lifecycle Model" has also been uploaded into the educational platform.
- **Task 3 - Translation of all material and upload on system:** Design and development of the LMS allowing for proper integration of all tools and training material. Evaluation has been conducted at three stages: (1) technical specifications stage, (2) primary operational phase testing basic functions and upload/download functions, and (3) final stage when all tools and training material are online - this is both internal and external i.e. with the TG during one seminar or workshop. Finalization of any issue that has risen has been concluded in order to complete LMS for pilot testing. This objective also includes the translation, uploading and finalization of the learning material in all languages related to the project.



## 4 The establishment of the DEM@ENTORING Platform

### 4.1 Introduction

E-learning or lifelong learning, as it is in nowadays called, is turning into a current topic due to the rapid changes expedited by the new information technologies. The idea implies that there is interest for steady learning for the duration of one's lifetime, and furthermore implies that from an expert perspective it is relatively mandatory to be persistently searching for some new information. Thus, members of current society need to be knowledgeable, as well as to have a decent instruction framework, which makes conceivable independent learning, training, and change of occupation. The old training framework can't meet these new requests, and this is one reason that the 'online learning', 'distance learning' and 'e-learning' are essential parts of our instruction and lifestyle. The universally purpose of e-learning platforms is to provide to users, information and structured processes to help them gain certain aptitudes and expand their dynamic information about a given theme. That is the reason it is imperative to create versatile instructive frameworks, keeping in mind that the end goal should be to influence the figuring out how to process as compelling, proficient, and inspiring as conceivable. This adjustment must occur autonomously of the course, maker or educator. In the previous years, numerous new e-learning stages have been created. Every one of them show distinctive answers for another learning model. The qualities which can be dissected and thought about, during the time spent for choosing an e-learning platform are related to usefulness viewpoints as well as educational issues. Specifically, adaptivity of frameworks to client needs, assumes a significant part for the viability and productivity of the e-learning process. The following educational requirements can be identified for an adaptive LMS:

- Data should adjust to what a user knows (earlier information) or can do (earlier ability).
- Information should adjust to users' learning capacities.
- Information should adjust to users' learning inclinations or style.
- Information should adjust to users' execution level and knowledge state (i.e. system should provide feedback).

### 4.2 Methodology

Throughout the lifespan of IO3 we have decided to follow an Agile Project Management (APM) approach due to the nature of the project. When the goal is clear, but the solution and how to get there is unclear, an APM model should be used<sup>1</sup>. These types of projects are defined as complex and require a non-traditional approach for a successful project execution.

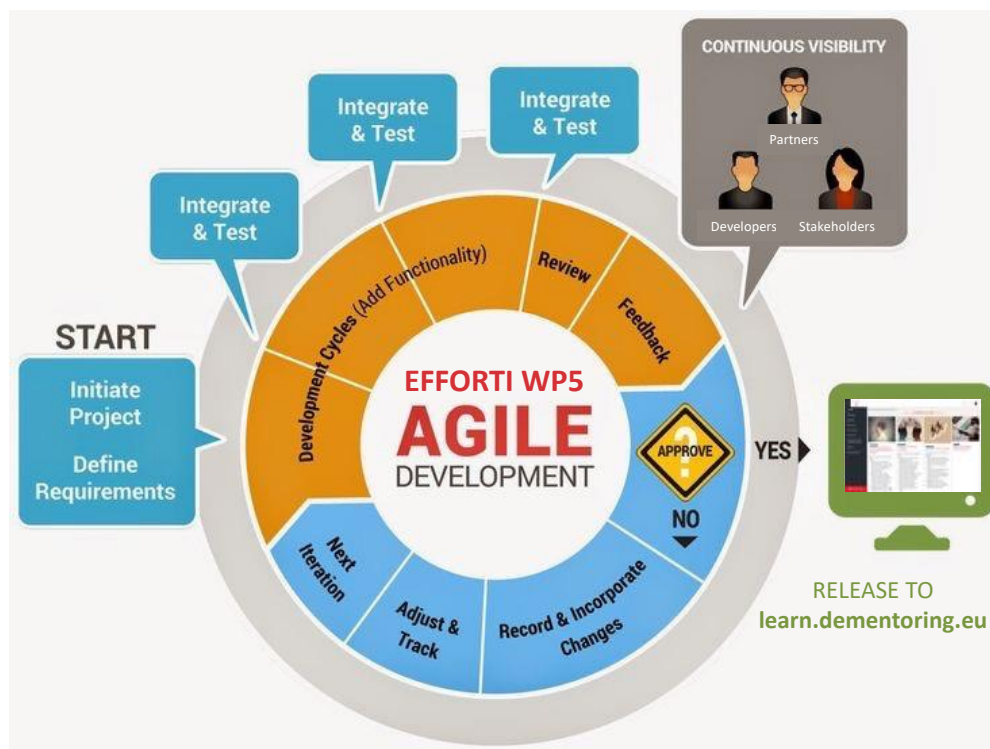
In TPM everything is planned out into details up front. This is called a plan-driven approach. In contrast, APM projects are change driven. This means that instead of avoiding changes in the project, changes are encouraged. This causes a more dynamic relationship between the team that creates the product, and the external stakeholders (anyone with a vested interest in the product) which requested it. Stakeholders are more involved in the process, but the end result is much closer to what they really wanted. Since the end solution (scope) is unclear at the beginning, it is defined throughout the project, based on feedback from the customer and other stakeholders.

This approach was considered the best possible one for IO3 and for the overall development of the DEM@ENTORING educational and eMentoring ecosystem INNOSYSTEMS technical team that created the platform actively involved and included the consortium partners and external stakeholders (through events conducted within the project, i.e. multiplier events, other dissemination events, as well as through the piloting test phases of the platform) into the development process through the APM approach and the continuous changes, comments and suggestions conveyed into the development team.

<sup>1</sup> Wysocki, R. K. (2014). *Effective project management: traditional, agile, extreme*. Indianapolis, Indiana: Wiley.



The iterative model improves on the incremental model by including planning in the implementation loop. Each loop creates potential shippable code (can be launched to production) which the stakeholders can give feedback on. Feedback is welcome and considered an integral part of the process. Based on the feedback and the overall vision of the product, a new iteration is planned, executed, and deployed. This way, the solution is not fully known at the beginning, but is defined throughout the project lifetime. The following figure shows this iterative model and how most process groups, including planning, are repeated in a loop.



**FIGURE 1: THE AGILE LIFECYCLE WITHIN IO3 OF DEM@ENTORING**

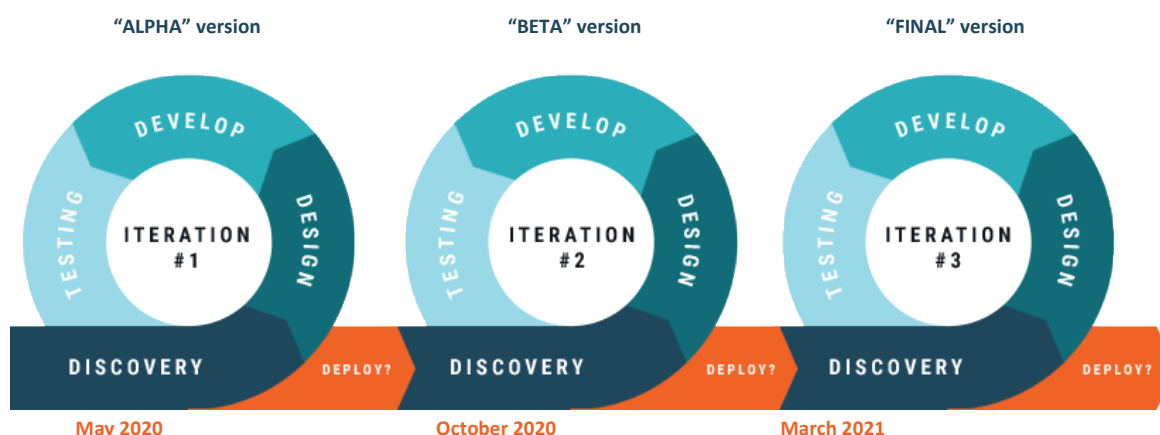
Agile methods are both incremental and iterative. Incremental because the work is pre-divided into smaller batches of work, and iterative because the scope of each batch is defined just before the start of each loop. This iterative nature makes the process very flexible.

APM also defined the adaptive model, which is very similar to the iterative model, but it has an even shorter loop time, making it easier to respond to changing requirements. The main difference between the adaptive and the iterative model is that more of the solution is unknown in the adaptive model. The less that is known, the more risk and complexity there is. When complexity is high, an adaptive model is more favourable.

Within DEM@ENTORING we have utilized various core iterative cycles for core deployments. The first iteration has evolved around the “alpha” version, which featured the first official presentation of the early vision of DEM@ENTORING educational and eMentoring ecosystem, primarily focusing on the digitisation of the content and creation of the courses. This spiralled into the follow up cycle for the “beta” version, which featured also the initial functionality of the eMentoring collaboration environment. Comments and feedback from the first cycle, created several sprints leading up to the second cycle. The final iterative cycle has focused on the “final” version of the platform. Feedback from this final cycle are the result of the final version of the DEM@ENTORING educational and eMentoring ecosystem, and are summarized in



the document entitled “Pilot Testing – Summary Report (all countries)”. The following figure portrays this cycle in more detail.



**FIGURE 2: THE ITERATION CYCLES IN THE LIFESPAN OF THE PROJECT**

It should be noted that the evaluation of the DEM@ENTORING educational and eMentoring ecosystem was twofold, (a) towards the content created and deployed in the OERs of the platform as this has been designed in IO2, and (b) with respect to the functionality provided by the platform regarding the eMentoring collaboration environment and other functionalities and processes offered by the overall ecosystem.

### 4.3 Review of open source e-learning platforms

In this section, a review of existing and well-grown open source e-learning platforms is presented to identify the one that covered the needs of the DEM@ENTORING project capacity building aspects. The reviewers explored the main features of each of the presented platforms having in mind the DEM@ENTORING training needs analysis. The software on this list was chosen for being free and/or open source, useful for corporate training, and is arranged in order of popularity based on Capterra's reviews<sup>2</sup>. Capterra is a website where a large variety of software categories is listed and evaluated based on real user reviews while conducting comparison of similar products.

#### 4.3.1 Moodle (<https://moodle.org/>)

Moodle is the most known open source Learning Management System (LMS) with a large active supportive community of users and up-to-date online documentation. It also supports a large variety of various plug-ins and settings for customization in the exact specifications and needs. Moodle can also support large scale communities with high performance rates.

Since Moodle's launch in the year 2002, it gained much popularity in the LMS world. Designed specifically to learn in an online environment, it became very useful for academic organizations all over the globe to create e-learning applications and attain impressive educational outcomes. Open source i.e. absolutely free for self-hosted environments, with unlimited users.

Some of Moodle's features are: 1. Dashboards 2. Structured courses templates 3. Progress tracking 4. Multimedia classes 5. Mobile friendly themes 6. Supporting 3rd party plug-ins and add-ons 7. Forums, wikis, assignments and quizzes.

#### 4.3.2 Dokeos (<https://www.dokeos.com/>)

Dokeos is another popular open source LMS built on PHP. Its open source version is only available for download and does not operate on cloud. Dokeos supports premade quiz and courses templates, private groups and a chat tool. Some of each key characteristic are the following: 1. Tests: multiple choice, fill-in-

<sup>2</sup> <https://www.capterra.com/learning-management-system-software/>



the-blanks, matching, open questions, hotspots. 2. Interaction: forums, chats, groups, web-conferencing 3. LDAP and OpenID authentication 4. More than 30 languages are supported.

#### 4.3.3 ILIAS (<https://www.ilias.de/en/>)

ILIAS is known as a flexible, versatile and scalable Learning Management System. A distinct feature of ILIAS is that of collaboration since it enables teams and users to share files and communicate over the platform. The main features are: 1. Individual personal user interface. 2. Course and group management. Learning progress management. 3. Learning content in various formats. 4. Repository with Role-Based Access Control.

#### 4.3.4 Claroline (<https://en.wikipedia.org/wiki/Claroline>)

Claroline is sometimes heralded as the original LMS. The argument is that most learning management systems are actually “teaching management systems”—meaning they manage and are geared toward the teachers far more than the learners. Claroline attempts to be learner-focused instead, by keeping the system as streamlined and as intuitive for the learner as possible. The system is extremely simplified, which allows for it to be very streamlined and stripped down. There isn't a lot of clicking around to find what you need. There are also social learning aspects, such as the ability to have students peer-edit one another. Claroline also comes mildly gamified with achievement badges. The streamlining and simplicity have a downside in that, aesthetically, the software looks a bit low tech. And while English versions are offered, the main site and other web resources are in French. Each course space provides a list of tools enabling to: 1. Write a course description 2. Publish documents in any format (text, PDF, HTML, video etc.). 3. Administer public and private forums 4. See the statistics of users' activity. 5. Use the wiki to write collaborative document.

### 4.4 DEM@ENTORING Educational and eMentoring Collaboration Platform

After thorough investigation among the open-source training platforms, it was decided to use the Moodle training platform. This decision was based on the strong and wide community of Moodle, the means and plugins offered to create dynamic course material and the technical support provided.

Moodle is a learning platform designed to provide educators, administrators and learners with a powerful, secure and coordinated framework to make customized learning conditions. Moodle has a simple interface, drag-and-drop features, and well-documented resources along with ongoing usability improvements. Moreover, Moodle provides the most adaptable set of tools and features to support both blended learning and 100% online courses. It is easy to be configured by choosing from a wide variety of core features and tailored it up to specific needs. Moodle is able to support up to millions of users. Because of its flexibility and scalability,

Moodle has been adapted for use across education, business, non-profit, government, and community contexts. Focused on defending information security and user privacy, security checks are always up to date to protect against unauthorized access, data misuse and loss. Thus, Moodle could be easily deployed on a private secured server.

#### 4.4.1 Architecture Overview

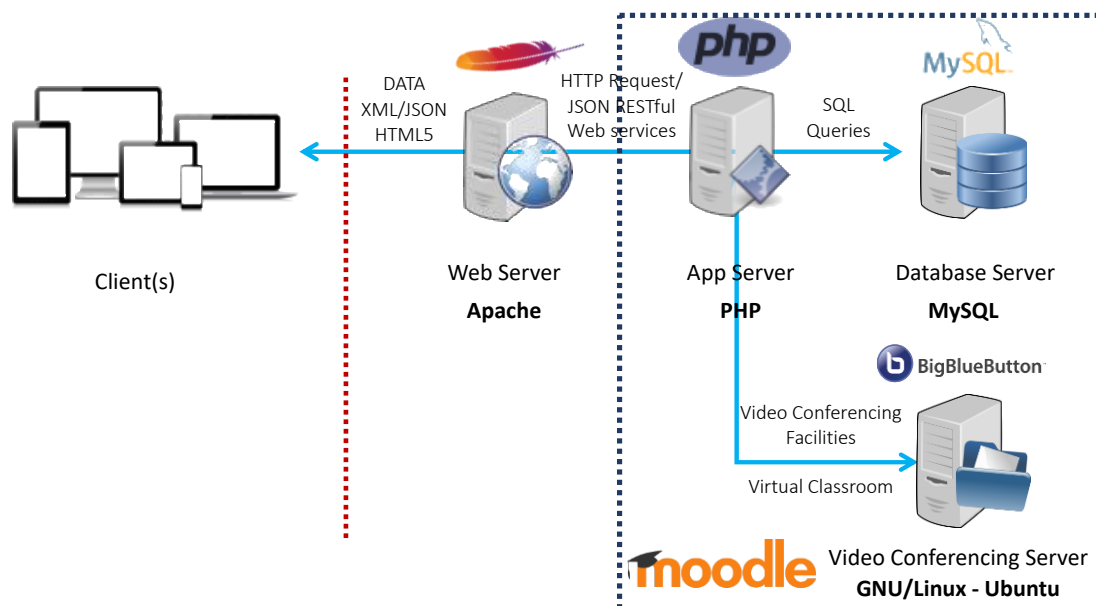
The Dem@enting online ecosystem has harmoniously combined and integrated all the proposed technological advances with the outcomes and results of the project, to produce an exploitable solution, which was considered as one of the core deliverables of the project. An online system with train-based information, advanced interaction possibilities, collaborative communication tools, action points, models and methodologies, training material etc. having allowed patients and caregivers, professionals, stakeholders etc. to actively and constructively interact and reach desired outcomes and goals.

Due to its importance, its execution was planned through three different phases so that it was possible to have an early, a beta and a final version to be tested and enriched in a constant iteration cycle throughout the different prototypes produced within the project. Following the user center approach as mentioned



also is the users' analysis, throughout the development process user acceptance studies ran in order to get feedback on the "look and feel" and the usability of the system. This also involved the support provision during the pilot phase.

As it is depicted in the following figure, the **Dem@entoring educational and eMentoring ecosystem** architecture is organized in three major layers, which are namely the **Web Server**, the **Application Server** and the **Database Server**, as well as a fourth critical component comprising of the **Video Conferencing Server** (see figure below), while each of the layers consists of a set of components and modules.



**FIGURE 3: OVERALL DEM@ENTORING ARCHITECTURE**

In more detail, the above-mentioned architecture is comprised of the following:

1. **Apache Web Server:** hosts the main system interface. It handles the different data downloading and uploading via http(s). The implementation utilizes Apache v2.4.29.
2. **PHP Application Server:** used for running and managing the business logic of the DEM@ENTORING PHP application, running under php version 7.4.
3. **MySQL Database Server:** stores the overall structure of DEM@ENTORING educational content and eMentoring data structures, as well as all other data provided by the web and application server. The implementation utilizes Mysql MariaDB v10.4.20 and the data models comprising the database server.
4. **Video Conferencing Server:** This server is dedicated to BigBlueButton plugin which is an open-source web conferencing system for distance education. It supports real-time sharing of slides (including whiteboard), audio, video, chat, and desktops.
5. **RESTful Web Services:** light weight, highly scalable and maintainable and are very commonly used to create APIs for web-based applications. These are explained in more detail, in Section 6 of this deliverable.

#### 4.4.2 Installing Moodle

The latest version of Moodle platform (Moodle 3.10.2) was installed on INNOSYSTEMS server. The System requirements for installing Moodle in the server were:

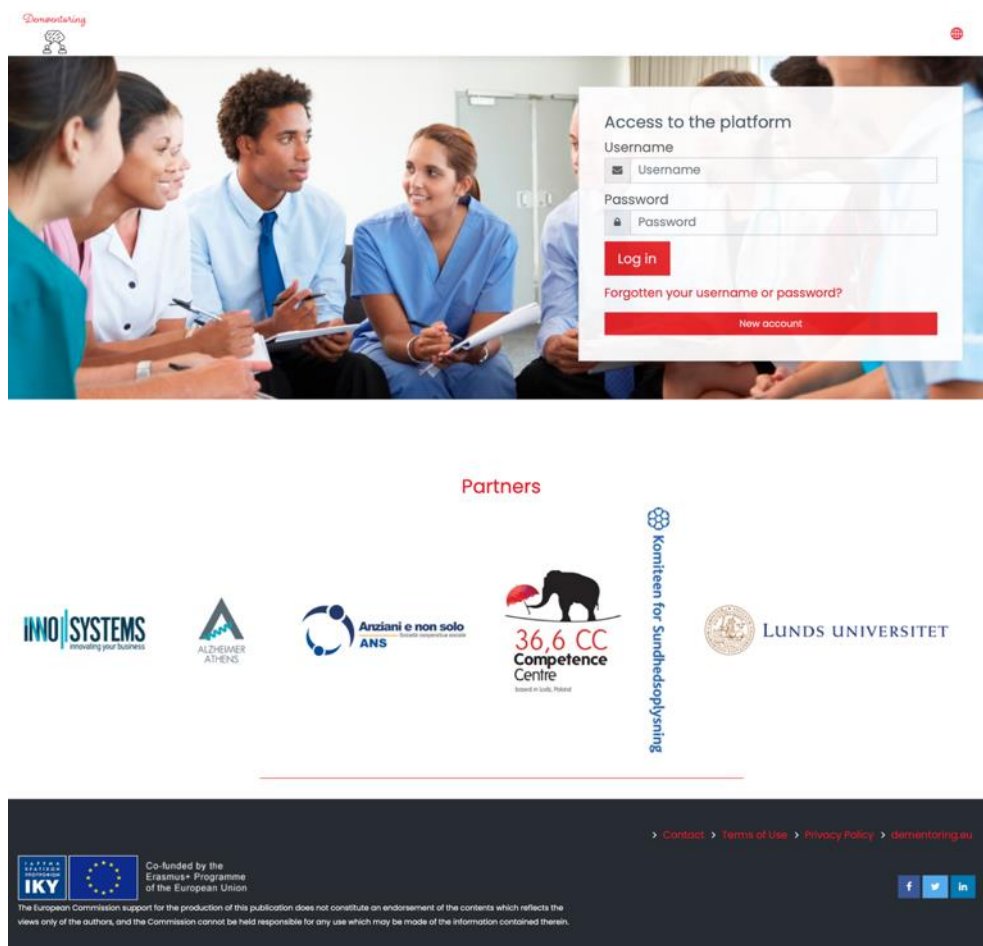
- 256 MB RAM (minimum), 1GB RAM (recommended)
- 500 MB free Fixed Disk (more space will be needed depending on user uploads)





- Debian (Debian GNU/Linux) installed as the Operating System as well as latest version of PHP

DEM@ENTORING educational platform URL is: <https://learn.dementoring.eu>. The courses cannot be accessed without a user account since the material is confidential and now concerns only the DEM@ENTORING consortium and registered users. The final version, at the end of the project, offers all additional material as described above. The figure below presents the landing page of the learning platform.



**FIGURE 4: DEM@ENTORING EDUCATIONAL PLATFORM LANDING PAGE**

Following logging into the platform the user is able to view the overall dashboard with all the courses available as depicted in the following figure.

**Site announcements**

[Add a new topic](#)

**How can I learn more about dementia diseases?**  
by Charalampos Vassiliou - Thursday, 6 February 2020, 7:45 PM

I want to find out more information about dementia diseases. Please advice were I can look for more information.

[Permalink](#) [Edit](#) [Delete](#)  
[Discuss this topic](#) (0 replies so far)

[Unsubscribe from this forum](#)

**Available courses**

**Course I: Knowledge and understanding of dementia diseases**

After the course the mentor should be able to

- describe the five most common cognitive disorders, the seven A's of dementia and the cognitive domains most commonly affected by a dementia disease
- describe the most common behavioural and psychological symptoms (BPSD) associated with a dementia disease and the most common behaviour management components and strategies
- describe the most common caring strategies related to communication and behaviour, socialization, nutrition as well as activity, participation and physical exercise
- describe different psychosocial interventions related to cognitive and multisensory stimulation, physical activity and exercise as well as the use of different welfare technologies
- describe different strategies for the prevention and treatment of accidents and injuries in the home
- describe issues specifically related to palliative care and end-of-life
- describe strategies related to empowerment and client advocacy
- explain the most prominent legal issues in relation to dementia care

[Access](#)

**Course II: E-mentoring knowledge**

After the course the mentor should be able to

- describe different adult learning strategies and models
- describe different communication methods and strategies useful in mentoring/coaching situations
- describe different strategies for facilitating adult learning
- describe different strategies for online teaching, learning and feedback
- describe legal and behavioural aspects of online learning
- describe different strategies for debriefing and supervision
- describe the boundaries of an e-mentor

[Access](#)

**Course III: E-mentoring skills**

After this course the e-mentors should be able to:

- apply and personalize strategies to facilitate learning among the mentees
- apply and use the online platform format to support and guide the mentee
- reflect upon the own communication and learning facilitation skills
- recognize the need for debriefing and supervision/mentoring/coaching in the role of a mentor
- identify situations where the obligations of the e-mentor end
- develop and maintain a positive and friendly mentoring situation

[Access](#)

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FIGURE 5: DEM@ENTORING USER DASHBOARD

### 4.4.3 Moodle Plugins

Moodle is a truly modular framework. Functionality is included in plugins, which can be enabled or disabled. Features are added to a Moodle web site by enabling existing plugins, installing plugins written by members of the Moodle community (notice that as of May 2021 the Moodle website lists almost more



than 1800 free plugins), or writing new plugins. In this way, web sites that do not need certain features can run lean and mean, while those that need more can add as much functionality as desired.

For the educational and eMentoring ecosystem of DEM@ENTORING the following plugins have been utilised, installed, and customised according to the needs of the platform, offering a wide range of extended functionalities: Assignment, BigBlueButton, Book, Chat, Choice, Database, Feedback, Folder, Forum, Glossary, H5P, IMS content package, Label, Lesson, External tool, Page, Quiz, File, SCORM package, Survey, URL, Wiki and Workshop (see details below).

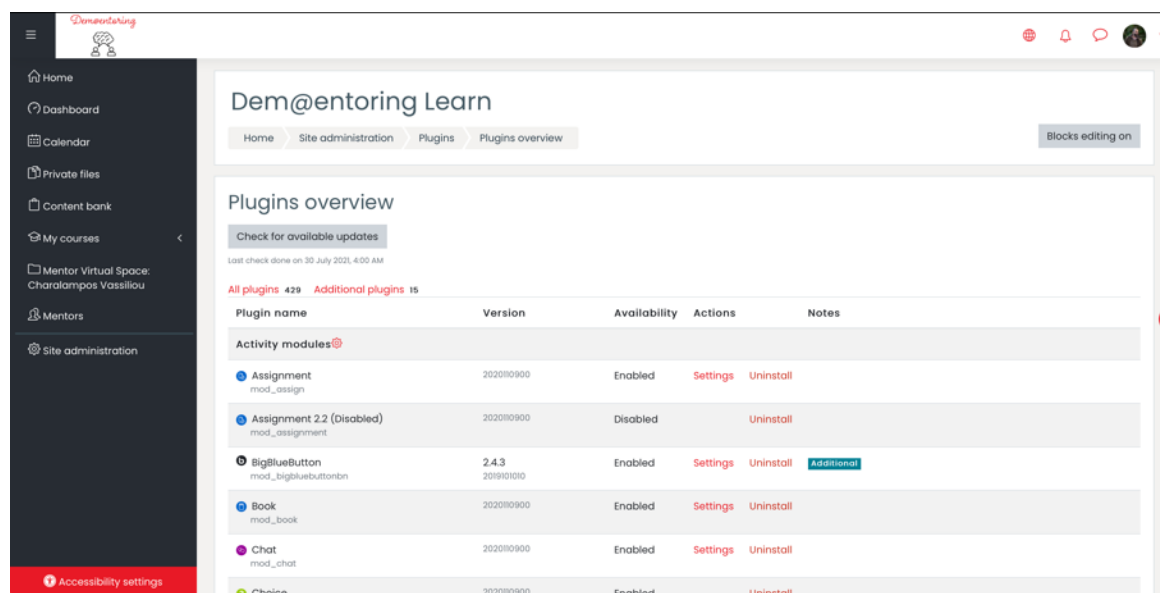


FIGURE 6: DEM@ENTORING PLATFORM PLUGINS MANAGEMENT

#### 4.4.4 Platform Theming

Following the installation of Moodle, the theme for the platform has been deployed and customized according to the needs of the project. Moove<sup>3</sup> has been selected as the most appropriate theme for the DEM@ENTORING educational platform. This is a free Moodle theme compatible with Moodle 3.8. It provides an app-like modern interface and is designed to help users focus on the site's content. The theme allows the addition of a header image with heading and 4 promotional spots with icon images, content and links. There is a custom login form overlaid on top of the header image for quick user login. Furthermore, the navigation drawer and the side blocks can be toggled, maximising screen space to focus on the course content. Finally, the dashboard contains a quick overview of useful stats such as disk usage, online users, and course and user totals.

#### 4.4.5 Basic Platform Requirements

The core functional requirements that should be provided by the DEM@ENTORING educational platform can be summarized as follows: (a) User friendly, (b) Gamification elements to suit patients & caregivers' profiles and expected features, (c) Provide anonymity and avatars to facilitate interaction and communication (user control), (d) Allow participants to interact with other users, (e) Pairing mentors & caregivers and application of the Circular Cycle of Mentoring Model, (f) Allow users to use tools available, e-calendar, specialist support, dementia information functions, social media etc., (g) Establish, 4-6 interactive OERs and good practices available for non-formal training, and (e) Closed sections i.e. closed forums where users can discuss.

<sup>3</sup> [https://moodle.org/plugins/theme\\_moove](https://moodle.org/plugins/theme_moove)





#### 4.4.6 Communication Tools

The proposed DEM@ENTORING educational platform also features the following communication tools:

- **Announcements Forum:** is a unique forum that acts as an announcements tool for Moodle course.
- **Email:** allows instructors (and students, if the instructor allows) to send emails to course members from Moodle.
- **Discussion Forums:** Instructors and students can communicate and collaborate in Moodle using *Forums*, sometimes called "discussions".
- **Events Block & Calendar Block:** Help instructors and your students to keep track of due dates and other important events in your course.
- **Checklist Activities:** allows teachers to create a "to do" list for students to work through and provides an easy visual representation of what has been accomplished so far.
- **Group Communication & Collaboration Spaces:** supports student-led activities and collaboration. In addition to forums, you can make use of the group, wiki, and chat features of Moodle to facilitate collaboration.

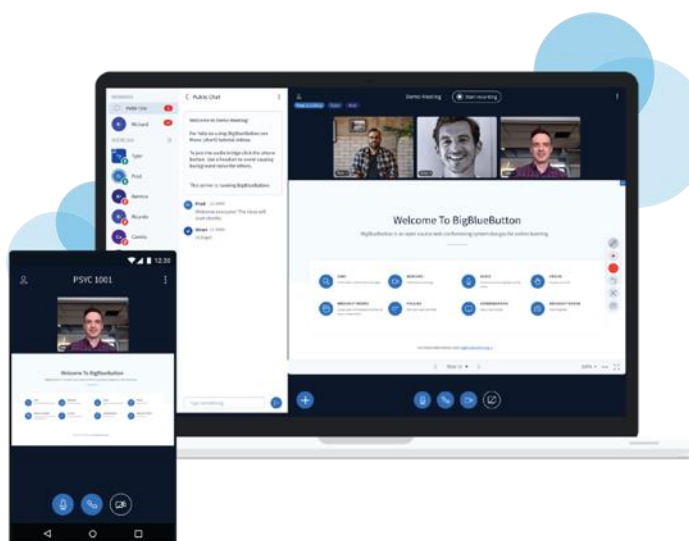
The final version of the DEM@ENTORING educational platform also features a video conferencing facility for the mentor/mentee online collaboration environment based on the BigBlueButton<sup>4</sup> Open Source Solution integrated to Moodle. BigBlueButton is an open source web conferencing system for distance education. It supports real-time sharing of slides (including whiteboard), audio, video, chat, and desktops. It also supports the recording of lectures for later playback, specifically the slides + audio + chat.

This module enables users to:

1. Create multiple activity links to on-line sessions within a course.
2. Restrict students from joining a session until a teacher (moderator) joins the session.
3. Launch BigBlueButton in a separate window.
4. Create a custom welcome message that appears at the top of the chat window when joining the session.
5. Specify join open/close dates for the session that appears in the Moodle's calendar.
6. Record a session (requires BigBlueButton 0.8 or later).
7. Access and manage recordings (requires installation of recordingsbn).

This plugin has been seamlessly integrated into DEM@ENTORING educational and eMentoring collaboration platform, allowing for Mentors to utilize this tool within their virtual education environments for planned eMentorship meetings, calendar integration, f2f one-on-one as well as group meetings with Mentees under each group, etc.

This plugin has a pure HTML5 interface that loads quickly, is accessible, and works across laptop, desktop, and mobile clients (phones and tablets). The features available to a user depends on how they joined the session and whether they are the current presenter. In a



<sup>4</sup> <https://bigbluebutton.org>



session, users join either as a viewer or moderator.

More specifically:

- **A viewer** (typically a mentee) can chat, send/receive audio and video, respond to polls, and display an emoji (such as raise hand). They can also draw on the whiteboard (if given permission by the presenter) and join a breakout room. A viewer, however, doesn't have any control over the session itself. That's the role of the moderator.
- **A moderator** (typically the mentor) has all the capabilities of a viewer plus the ability to mute/unmute other viewers, lock down viewers (i.e. restrict them from doing private chat), and assign anyone (including themselves) the role of presenter. A session can have multiple moderators. Moderators can also eject any user, start/stop recording, end the session at any time.
- The presenter controls the presentation area. In this respect, the presenter can upload slides, annotate the current slide with the whiteboard controls, enable/disable multi-user whiteboard, start a poll, and share their screen for all to see. Only one person at a time can be presenter.
- Given the above – viewers, moderators, and presenter – we can break down the capabilities of the product according to each role.

#### 4.4.7 Gamification Mechanics

Gamification features, herein referred to as “mechanics,” are integrated into the greater context of the DEM@ENTORING educational platform for purposes of bolstering usability and by appealing to those facets of video games which gamers typically enjoy, and which compel continued play. An understanding of these mechanics and their associated design and development considerations, as contextualized through eHealth services and application examples, could aid in guiding the development of gamified eHealth services and applications that could better incentivize patient self-management.

Gamification uses the natural desire for competition, achievement, status, altruism and/or collaboration (depending on personality type). Through the gamification mechanics employed withing DEM@ENTORING we want to promote, (a) **Objectives:** A behavioural mechanic type, requiring the user to take action for reward, (b) **Progression:** Move the user through the content, and (c) **Feedback:** Informing the user of their status. The mechanisms considered include: Interactivity, Instant feedback, Progress indicators, Time limits, Repetition, Unveiling of levels, Scoreboards, Badges and Awards, Social Interaction, etc.

Within DEM@ENTORING, in the development of the educational content and the OERs, we have utilised the active surface mode and links in order to create unique gamified experiences with the Course Presentation content type. By utilizing H5P Moodle plugin we are given access to a variety of interactive content features. It lets us represent our online courses and learning content through a series of interactive features compiled in a Moodle app. Above all, H5P offers several content types for the gamification of Moodle courses. The most extensively used content types for Gamification under H5P include course presentation, arithmetic quiz, personality quiz, and memory game. In DEM@ENTORING we used primarily the “Single Choice Set” content type allowing the creation of simple and smooth quizzes consisting of single choice questions.

The Single Choice Set content type allows us to create question sets with one correct answer per question. This fits perfectly the structure of all tests and quizzes for all DEM@ENTORING courses, as these have been designed in “**IO2: Training Course on e-mentor – Curricula**” and are featured in the relevant Annex of that document and also featured as an annex in this one. The end user gets immediate feedback after submitting each answer.

Single Choice Set questions have been used for testing skills related to the three main course of DEM@ENTORING, i.e. Course I: Knowledge and understanding of dementia diseases, Course II: E-mentoring knowledge, and Course III: E-mentoring Skills, and has been an effective assessment tool. For Course I we have utilised this content type for providing quizzes after each sub-section of the course, whilst for Course II and Course III we have used the Single Choice Set for assessment at the end of the



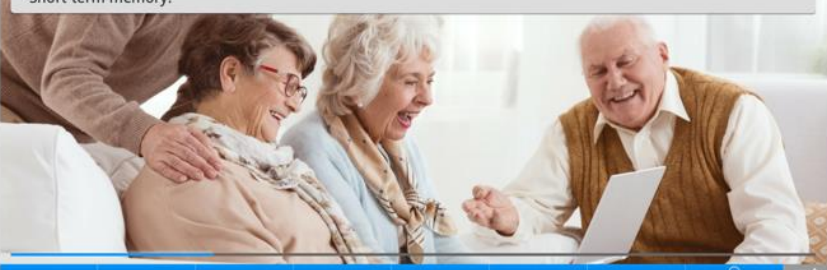

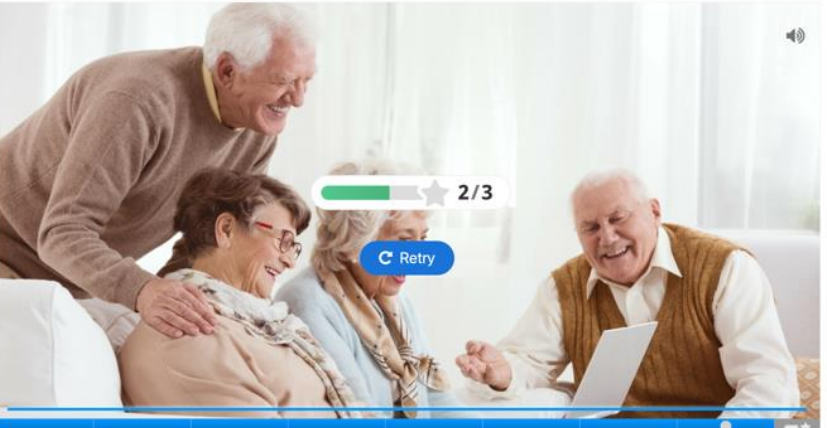
whole course. The assessment provided by these test and quizzes have been critical in assessing the progress of the trainee (mentee) and awarding the different DEM@ENTORING badges of our competency framework, according to his/her progress. This content type provides immediate feedback and a summary at the end, therefore user learning is reinforced. Single Choice Set features sound effects for correct and wrong (sound effects may be turned off). The Single Choice Set questions have been integrated into the Presentation content type that has been used for the development of all the courses.

The Single Choice Set question content type consists of a question and a set of alternatives. The Question is used to introduce the problem to be solved, and the alternatives are the possible answers the learner can choose from. Below are examples of Single Choice Set creation and how the end result appears to the learner.

The screenshot displays the 'Single Choice Set Management' interface. At the top, there's a breadcrumb '1.1. Difficulties in cognition' and a 'Difficulties in cognition' tab. A 'Delete' button and a 'Done' button are visible. Below the title 'Title \*', there's a 'Metadata' section with the text 'Used for searching, reports and copyright information'. The main content area is titled 'List of questions \*' and has two tabs: 'Textual' and 'Default'. A question is selected, showing its details: 'What is usually the first cognitive function ...'. The question text is 'What is usually the first cognitive function to be affected when a person has a dementia disease?'. Below the question, there are two alternatives: 'Short-term memory.' and 'Language.'. The first alternative is marked as the correct one.

FIGURE 7: SINGLE CHOICE SET MANAGEMENT



<p>1.1. Difficulties in cognition</p> <p>What is usually the first cognitive function to be affected when a person has a dementia disease?</p> <p>Perceptual-motor function.</p> <p>Language.</p> <p>Short-term memory.</p> 	<p>Visual representation of questions and potential answers.</p>
<p>What is agnosia?</p> <p>Loss of language skills, including the ability to speak, understand, read or write.</p> <p>Inability to recognize things through the senses: sight, sound, taste, touch and smell. ✓</p> <p>The person is unable to brush their teeth.</p>  <p>1.1. Test 8 / 9</p>	<p>Correct answer indicated with visual and audio feedback</p>
 <p>1.1. Test 8 / 9</p>	<p>Overall questionnaire assessment and possibilities to re-run the test with answer re-ordering</p>

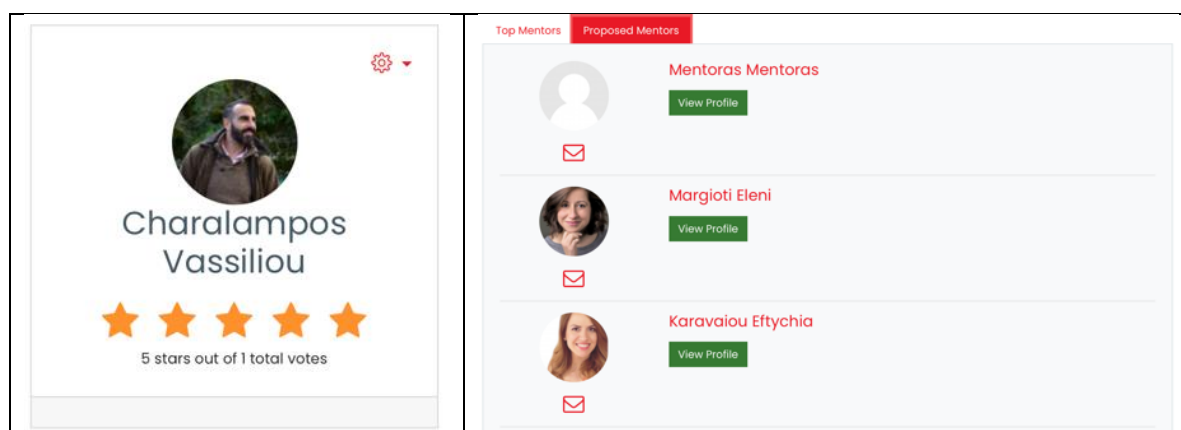
**FIGURE 8: EXAMPLE OF SINGLE CHOICE SET IN DEM@ENTORING**





Finally, we have established a ranking and leadership board for mentors based on their evaluation by mentees that have been following them and participated into their virtual eMentoring classrooms. Level Up is a plugin for Moodle that aims to enhance its gamification aspect. First released in 2015, it is popularizing among the Moodle community worldwide. As the name suggests, once integrated to the Moodle course page, instructors could set up their course in a way that students will accumulate points by completion of activities and eventually “level up” by unlocking the next level. In addition, students may also observe their progress in a progress bar, collect badges when unlocking levels and compete against classmates to gain a top place in the leader board.

In DEM@ENTORING we have utilised Level Up! class Leader Ladder to encourage competition between mentors. Mentees are able to rate mentors during the course of the mentorship. Mentors can see their relative position and ranking. When a mentee is searching for a potential mentor, this leadership board is utilised to propose “Top Mentors” to the mentee according to overall platform data on assessment and performance or “Proposed Mentors” depending on the searching terms thus proposing mentors from the “top” list based on the search criteria. This acts as a personalised mentoring recommendation engine for all mentees. Below there is an example of these gamification leadership aspects put into play:



**FIGURE 9: MENTORSHIP LEADER BOARD AND PERSONALISED MENTORING RECOMMENDATIONS**

#### 4.4.8 Badges and Competences




Within DEM@ENTORING we have established a unique, tailor-made competences framework to depict the evolution of learner from the initial level of a mentee, all the way up to the level of an experienced mentor capable of providing knowledge, education and sharing experiences with other mentees in the platform. The **DEM@ENTORING Mentoring Competences Framework** has been based at large to the content design depicted in “IO2: Training Course on e-mentor – Curricula” and the Mentoring methodology proposed in “IO5: The Mentoring Lifecycle Model”.

The proposed competences framework works also towards the gamification mechanics of the platform as described above. It provides **badges** to the learners depending on their progress and also depicts their level of progress and evolution depending on the completed activities and assessment results they have achieved at each course. The table below describes in detail the different levels of the competence framework and badges:



Badge	Level	Competences	Criteria
	<b>Dementia Friend (Level 1)</b>	<ul style="list-style-type: none"> <li>First contact with dementia, the main subtypes and the impact on individual's daily living.</li> <li>Comprehend dementia's co-morbidities, like agnosia and apraxia.</li> </ul>	<p>Interactive Content Completed:</p> <ul style="list-style-type: none"> <li>✓ 1.1. Difficulties in cognition.</li> <li>✓ 1.2. The most common cognitive disorders.</li> </ul>
	<b>Dementia Friend (Level 2)</b>	<ul style="list-style-type: none"> <li>Skills acquisition concerning management of behavioural and psychosocial symptoms of dementia.</li> <li>Strategies to cope with symptoms crisis.</li> <li>Ability to construct an appropriate care plan.</li> <li>Ability to use appropriate communication skills.</li> <li>Support and understanding (empathy).</li> <li>Feeding and nutrition skills</li> <li>Strategies to encourage individual's participation in social activities.</li> </ul>	<p>Interactive Content Completed:</p> <ul style="list-style-type: none"> <li>✓ 2.1 "Challenging behaviours associated with dementia".</li> <li>✓ 2.2 "Psychosocial management of BPSD, including a care plan".</li> <li>✓ 2.3 Principles of care for people with dementia regarding BPSD".</li> </ul> <p>Interactive Content Completed:</p> <ul style="list-style-type: none"> <li>✓ 2.4 Communication and understanding behaviour".</li> <li>✓ 2.5. Socialization".</li> <li>✓ 2.6 Feeding and nutrition".</li> <li>✓ 2.7 "Activity and participation".</li> </ul>



	<p><b>Dementia Friend (Level 3)</b></p>	<ul style="list-style-type: none"> <li>• Cognitive Stimulation Therapy (CST)</li> <li>• Effects of exercise and alternative modes of activities, like dancing.</li> <li>• Knowledge of welfare technology.</li> </ul>	<p>Interactive Content Completed:</p> <ul style="list-style-type: none"> <li>✓ 3.1 Cognitive stimulation".</li> <li>✓ 3.2 Multisensory stimulation".</li> <li>✓ 3.3 Physical activity and exercise".</li> <li>✓ 3.4 Use of welfare technology".</li> </ul>
	<p><b>Dementia Friend (Level 4)</b></p>	<ul style="list-style-type: none"> <li>• Handle and prevent possible accidents.</li> <li>• Create a safe living environment (protective measures).</li> <li>• Deeper knowledge in different types of abuse and sexuality.</li> </ul>	<p>Interactive Content Completed:</p> <ul style="list-style-type: none"> <li>✓ 4.1 Home accident prevention.</li> <li>✓ 4.2 Physical and pharmacological restraints.</li> <li>✓ 4.3 Abuse.</li> <li>✓ 4.4 Sexuality.</li> </ul>
	<p><b>Trainee Mentor</b></p>	<p>Ability to:</p> <ul style="list-style-type: none"> <li>• describe different adult learning strategies and models</li> <li>• describe different communication methods and strategies useful in mentoring/coaching situations</li> <li>• describe different strategies for facilitating adult learning</li> <li>• describe different strategies for online teaching, learning and feedback</li> <li>• describe legal and behavioural aspects of online learning</li> <li>• describe different strategies for debriefing and supervision</li> <li>• describe the boundaries of an e-mentor</li> </ul>	<p>Completed <b>Course II: E-mentoring knowledge</b>, successfully.</p> <p>Completed all activities and furthermore performed 100% correct answers in the Quiz.</p>





	<b>Basic or Junior Mentor</b>	<p>Ability to:</p> <ul style="list-style-type: none"> <li>• apply and personalize strategies to facilitate learning among the mentees</li> <li>• apply and use the online platform format to support and guide the mentee</li> <li>• reflect upon the own communication and learning facilitation skills</li> <li>• recognize the need for debriefing and supervision/mentoring/coaching in the role of a mentor</li> <li>• identify situations where the obligations of the e-mentor end</li> <li>• develop and maintain a positive and friendly mentoring situation</li> </ul>	<p>Completed <b>Course III: E-mentoring skills</b>, successfully. Completed all activities and furthermore performed 100% correct answers in the Quiz.</p>
	<b>Advanced or Expert Mentor</b>	<p>A person able to provide eMentoring expertise, know-how and educational material. Share experiences with mentees. A mentor at this level has extended experience on the domain of dementia as well as in a proven track-record of mentoring capabilities.</p>	<p>To reach this level, the mentor needs to have <b>5 mentee registrations</b> throughout the use of the platform as well as at least <b>2 out of 5 stars</b> in their overall evaluation by mentees (profile).</p>

**TABLE 1: DEM@ENTORING COMPETENCE FRAMEWORK AND BADGES**

The figure below portrays the management of these badges in the platform:

Name	Badge status	Criteria	Recipients	Actions
DEMENTIA FRIEND Level 1	Available to users	• Complete ALL of: "Interactive Content - 1.1. Difficulties in cognition", "Interactive Content - 1.2. The most common cognitive disorders"	8	
DEMENTIA FRIEND Level 2	Available to users	• Complete ALL of: "Interactive Content - 2.1 Challenging behaviours associated with dementia", "Interactive Content - 2.2 Psychosocial management of BPSD, including a care plan", "Interactive Content - 2.3 Principles of care for people with dementia regarding BPSD", "Interactive Content - 2.4 Communication and understanding behaviour", "Interactive Content - 2.5. Socialization", "Interactive Content - 2.6 Feeding and nutrition", "Interactive Content - 2.7 Activity and participation"	8	
DEMENTIA FRIEND Level 3	Available to users	• Complete ALL of: "Interactive Content - 3.1 Cognitive stimulation", "Interactive Content - 3.2 Multisensory stimulation", "Interactive Content - 3.3 Physical activity and exercise", "Interactive Content - 3.4 Use of welfare technology"	8	
DEMENTIA FRIEND Level 4	Available to users	• Complete ALL of: "Interactive Content - 4.1 Home accident prevention", "Interactive Content - 4.2 Physical and pharmacological restraints", "Interactive Content - 4.3 Abuse", "Interactive Content - 4.4 Sexuality"	8	

FIGURE 10: MANAGEMENT OF DEM@ENTORING COMPETENCE FRAMEWORK AND BADGES



## 5 Content Creation (OERs)

### 5.1 Introduction

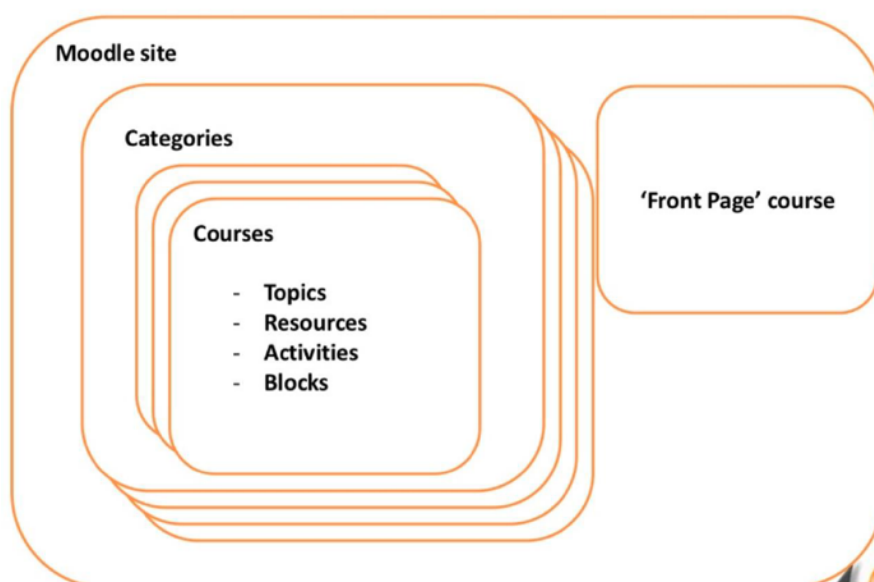
The most important feature in a Learning Platform is the course management and the functionalities support for versatile and dynamic content creation. Thus, the course is the foundation of the learning platform and within it activities, modules, plugins, resources, blocks and filters can be added.

A lesson in Moodle comprises several pages which may have content to be read or questions to be answered, etc. The content and questions are prepared beforehand by the tutor, which in the case of DEM@ENTORING this has been established by the expert consortium members within the context of IO2.

The Course management includes the following capabilities:

1. Store documents, links, videos, images
2. Build a searchable repository of files
3. Communicate through a Messaging environment, a Forum
4. Create RSS feed
5. Setup a dynamic calendar with deadlines and milestones for each course
6. All users and subscribers of a course can publish, reflect, clarify, create groups for discussion through the course blog. They can also create a glossary/ repository with related material, links, wiki etc.
7. Users could organize workshops to share ideas, brainstorm and enhance existing material
8. Course subscribers can be evaluated or/and self-evaluated through quizzes, multiple choice tests, pre-set surveys to identify their needs.

The following figure depicts in a high level the structure of Moodle. Within Moodle site, in order to create courses, categories are needed to nest the courses based on a specification category expressing the context of each course. The next step is to create the course and then add under it all the necessary topics' descriptions, resources, activities etc.



**FIGURE 11: MOODLE HIGH LEVEL STRUCTURE**



After installing Moodle and having finalized the curricula design and material collection, courses were created related to the following categories, in all the different languages supported by the project:

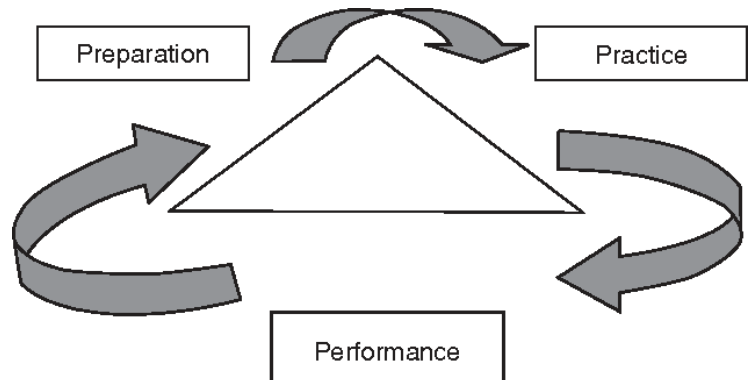
- **Course I:** Knowledge and understanding of dementia diseases
- **Course II:** E-mentoring knowledge
- **Course III:** E-mentoring skills

The detailed structure of the curricula and content can be found in the annex of this document and in “IO2: Training Course on e-mentor – Curricula”.

## 5.2 Methodology

The content methodology employed within the DEM@ENTORING educational platform is based on the model template entitled **3Ps** used for the development of the OERs. The concept is a pedagogical model for teaching emphasizing on the 3Ps, which are:

- **P1** = Teacher **P**resents the content
- **P2** = Teacher helps learners to **P**actice the activities proposed by the teacher and offers feedback.
- **P3** = Teacher asks learners to **P**erform by producing evidence of their competence, for which they receive feedback and/or grades.



## 5.3 Creation Process

The DEM@ENTORING educational platform by Moodle offers a user-friendly environment for content creation and the site administration is easy and flexible. The following figure captures how a course is added with its initial information.

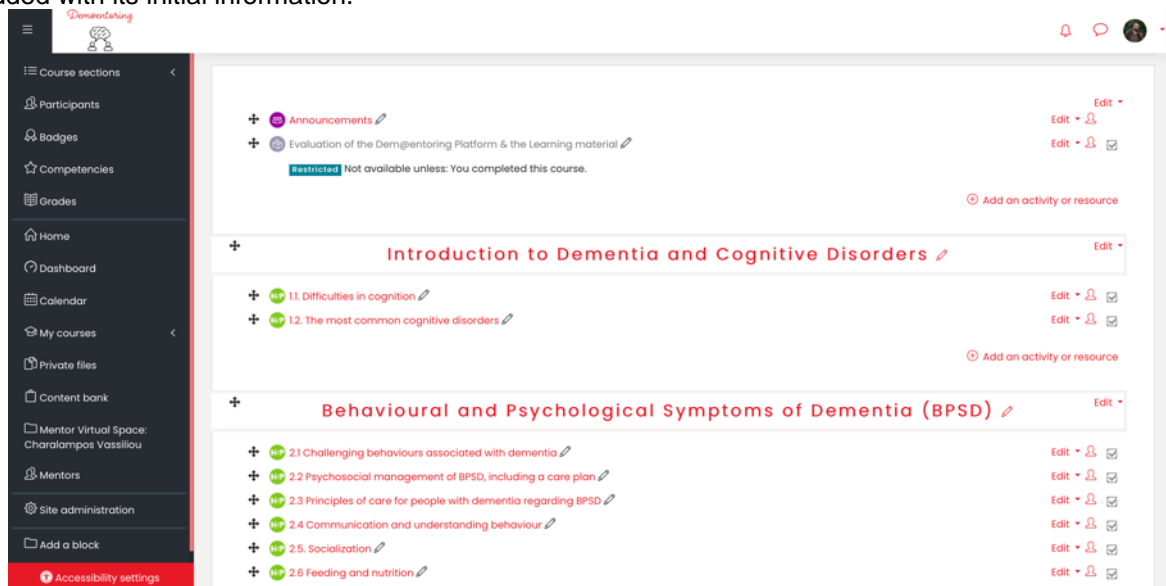
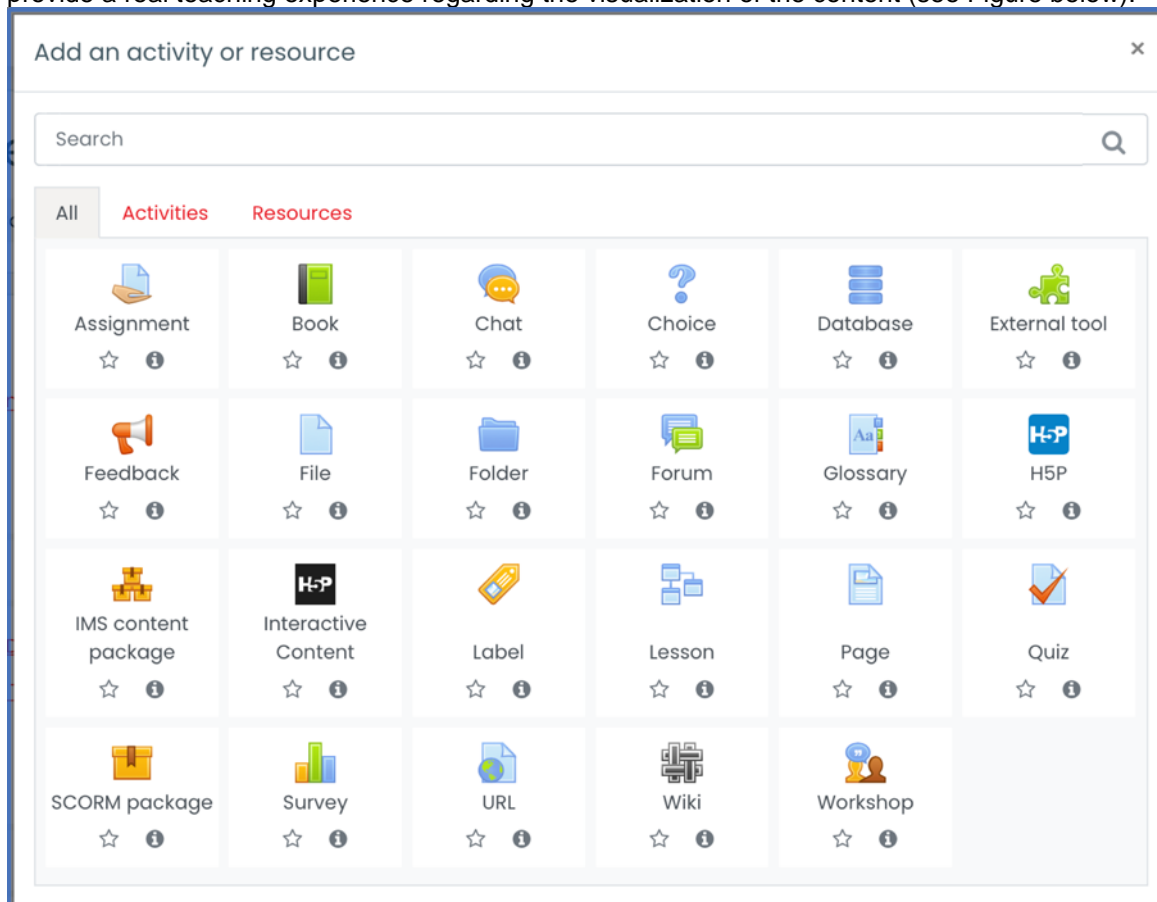


FIGURE 12: COURSE ENVIRONMENT



In each course, the platform provides various activities or resources to add to create dynamic content and provide a real teaching experience regarding the visualization of the content (see Figure below).



**FIGURE 13: ADDING AN ACTIVITY OR RESOURCE**

Interactive OERs were designed and developed by the partners based on identified and addressed needs. Webinars were organized, delivered, and recorded to be put online for training purposes. OERs were SCORM and HTML5 for easy viewing as well as responsive for access through multiple devices. INNOSYSTEMS was responsible for the instructional design of the OERs.

Following the technical specifications deriving from the users' needs analysis elicitation (IO1) and the development of the training course on e-mentor – curricula (IO2), INNOSYSTEMS designed and developed the LMS allowing for proper integration of all tools and training material.

In terms of the content methodology, a model template was created by Lund University in Sweden, which was used for the development of the OERs. These were finally evaluated in terms of design and knowledge provision by the invited expert professors and quality managers from Lund University. Below, there are some indicative screenshots from the educational platform and the eMentoring collaborative environment.

## 5.4 H5P

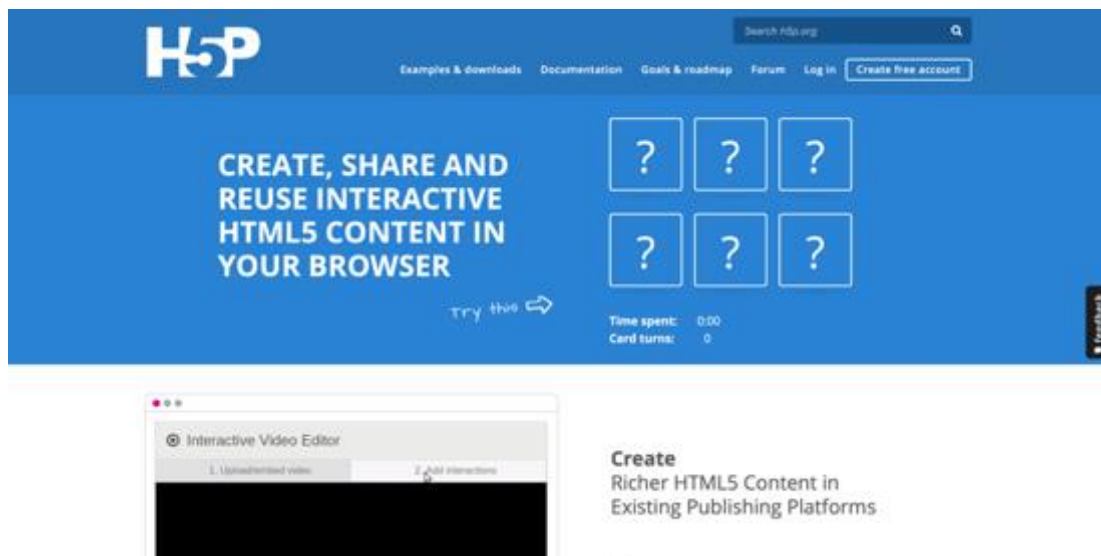
Within the DEM@ENTORING educational platform, a core plugin that has been utilised in order to support content creation, has been H5P (<https://h5p.org>). H5P makes it easy to create interactive content by



providing a range of content types for various needs. H5P is an abbreviation for HTML5 Package. It enables educators to create content such as interactive videos, quizzes and presentations.

The creation of the content of all multilingual educational content and interactive lessons (i.e. Course I, Course II, and Course III) was based on H5P, that stands for HTML 5 Package (figure below), and was originally developed by the Norwegian company Joubel (in Tromsø) for the National Digital Learning Arena, a Norwegian publicly funded learning portal [26].

Its development was motivated by the need to move away from Flash based content. It is an “MIT licensed community development project”. Each H5P content type is simply a collection of HTML, CSS and Javascript files zipped together. This means interactive content can be shared between a huge range of websites and platforms. H5P provides more than 40 types of self-contained HTML5 interactive content, that can be embedded into web pages [27].



The figures below present three distinctive cases of H5P content within our courses: (a) a normal slide with educational information, (b) a video presentation, and (c) an interactive quiz.



The screenshot shows the Dem@ntoring platform interface. On the left is a dark sidebar with navigation options: Course sections, Participants, Badges, Competencies, Grades, Home, Dashboard, Calendar, Private files, Content bank, Site administration, and Add a block. The main content area is titled 'Course I. Knowledge and understanding of dementia diseases' and '2.5. Socialization'. A slide is displayed with the title 'What do we mean by socialization for a person with dementia?'. The slide content includes a list of bullet points: 'Socialization provides a controlled, yet varied climate of both human and environmental interaction.', 'Research shows that being social is an essential part of one's brain health along with healthy diet and exercise (Alzheimer's Association). It's also important to provide a sense of connectedness.', and 'Some socialization are intended to spark the senses, such as experiencing a new location, or smelling fresh flowers in a garden. Others may involve exposure to new faces in the form of other adults, younger people, and also animals.' The slide is part of a sequence of 8 slides, currently showing slide 1. At the bottom, there are navigation links for '2.4 Communication and understanding behaviour' and '2.6 Feeding and nutrition'. The footer includes logos for IKY and the European Union, and a disclaimer: 'Co-funded by the Erasmus+ Programme of the European Union. The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.'

FIGURE 14: EDUCATIONAL CONTENT IN A SLIDE

The screenshot shows the Dem@ntoring platform interface, similar to the previous one. The main content area is titled 'Course I. Knowledge and understanding of dementia diseases' and '2.5. Socialization'. A video player is displayed with the title 'Here is a video about caregivers and dementia'. The video is from 'UCLA Alzheimer's and Dementia Care Program' and shows a caregiver interacting with a person. The video is part of a sequence of 8 slides, currently showing slide 2. At the bottom, there are navigation links for '2.4 Communication and understanding behaviour' and '2.6 Feeding and nutrition'. The footer includes logos for IKY and the European Union, and a disclaimer: 'Co-funded by the Erasmus+ Programme of the European Union. The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.'



FIGURE 15: VIDEO PRESENTATION

The screenshot displays the Dem@enting course interface. On the left is a dark sidebar with navigation options: Course sections, Participants, Badges, Competencies, Grades, Home, Dashboard, Calendar, Private files, Content bank, Site administration, and Add a block. The main content area is titled 'Course I. Knowledge and understanding of dementia diseases' and shows a breadcrumb trail: Home > Courses > Course I. Knowledge and understanding of dementia diseases > Behavioural and Psychological Symptoms of Dementia (BPSD) > 2.5. Socialization. The current section is '2.5. Socialization', which includes a video player. The video content asks 'How do you choose the best time and place for socialization of people with dementia?' and provides three text-based answers: 1) Socialization can be planned any time of day and when it is most convenient for you. This can be late afternoon and late evenings as well. 2) Socialization should be planned for the time of day when the person is feeling his/her best, avoiding exercise and physical activities. 3) Socialization should be planned for the time of day when the person is feeling his/her best. Avoid "sundowning" and crowded places. Below the video is a progress bar and a '2.5. Test' section. At the bottom, there are navigation links for '2.4 Communication and understanding behaviour' and '2.6 Feeding and nutrition'. The footer includes logos for IKY and the European Union, a statement about Erasmus+ funding, and a disclaimer from the European Commission. Social media icons for Facebook, Twitter, and LinkedIn are also present.

FIGURE 16: INTERACTIVE QUIZ

## 5.5 H5P and OERs

With respect to creating OERs by using H5P, it should be noted that H5P and the H5P libraries shared on H5P.org are licensed with free and open licenses making H5P free and open to use for everyone. One of the unique things with H5P is that H5P makes all kinds of interactive content editable for everyone. Furthermore, H5P makes sure that the creators of the content get proper credit and that licensing information stays with the content when it gets transferred from one website to another and modified.

Most importantly, by implementing and utilizing the xAPI standard H5P makes data about the user's results, actions and experiences available for other systems. With xAPI, website-owners are in control of where the Tin Can data is being sent. When most OERs in the world generates xAPI statements about user's activities and results the possibilities for reuse and integrations between OERs and other systems like learning analytics tools are enormous. The intention is to start sharing the content of DEM@ENTORING as an OER when the H5P OER hub will be finalised<sup>5</sup>.

<sup>5</sup> <https://h5p.org/oer-hub-coming>

## 5.6 Content Evaluation and Assessment

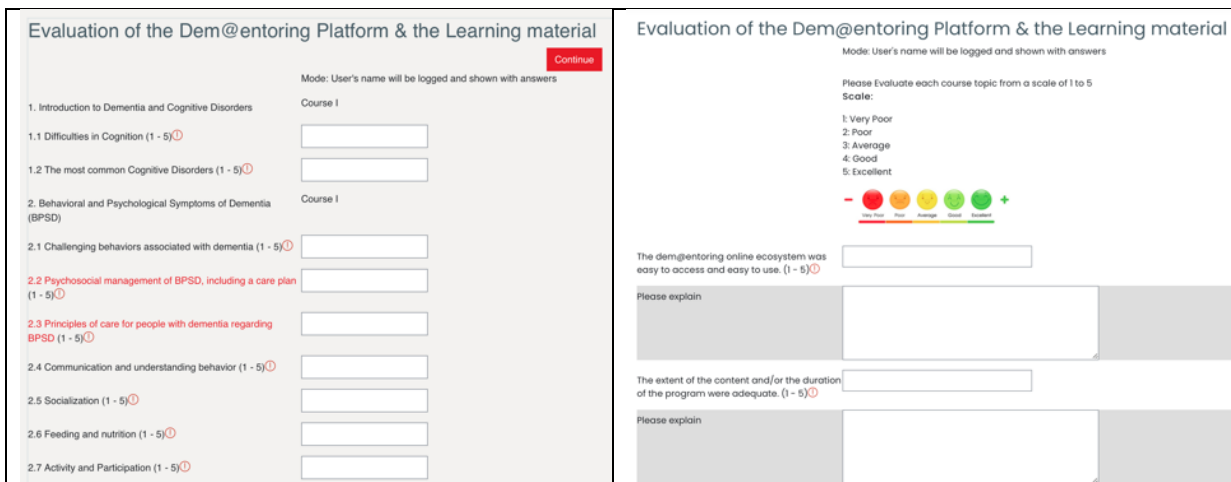
For the evaluation process and assessment of (a) the overall platform in terms of functionality and interactivity, and (b) as well as the content itself for all courses, a set of two questionnaires have been produced and uploaded into the platform. These can be found in the Annex of this document.

When a user completes a course, he/she is able to fill in a questionnaire that collects information regarding the content of the course. We congratulate the user for completing the DEM@ENTORING training and requested a reply to the evaluation questionnaire, with questions that have been designed in order for you to give us feedback for the development of DEM@ENTORING platform and the respective learning material.

In the course content questionnaire, we requested to evaluate each course topic from a scale of 1 to 5, with the following scale: 1: Very Poor, 2: Poor, 3: Average, 4: Good, and 5: Excellent. Each section and subsection of all three DEM@ENTORING courses could be evaluated based on the above-mentioned scale. Furthermore, using the same scale and open-ended questions, another questionnaire was provided to all end users with respect primarily to the performance of the overall platform in terms of functionality and interactivity. Some indicative questions towards this end include the following:

- The DEM@ENTORING online ecosystem was easy to access and easy to use.
- The extent of the content and/or the duration of the program were adequate.
- The DEM@ENTORING learning material was easy to understand.
- The educational method used was appropriate for the topics covered in the program.

The following figures portray the evaluation questionnaires in action for the platform as well as for the assessment of the learning material.



**FIGURE 17: EVALUATION QUESTIONNAIRES FOR THE PLATFORM AND THE LEARNING MATERIAL**

More details regarding the overall methodology and process followed for the Pilot Testing phase can be found on the document entitled “PILOT TESTING GUIDELINES”.

With respect to the quality of the content the following summarized results have been provided:

<p>Quality of the contents</p>	<p>The training content has a high quality, and it covers a wide range of topics. It also combines academic knowledge with hands-on knowledge.</p> <p><i>“The content of the platform was considered to be of high quality. It comprised both research-based knowledge as well as current practice. Thus, the content fulfils the objectives.”</i></p> <p><i>“The quality of the material was considered high. As for the modules II and III, more case studies would be useful to get further insights on how to become a good e-mentor.”</i></p>
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More details regarding the summary of all assessment and evaluation results for all participating countries, can be found on the document entitled “PILOT TESTING – Summary report”.



## 6 Conclusion

The core outcome of Intellectual Output 3 (IO3) was to develop the whole DEM@ENTORING ecosystem (a holistic platform combining the educational part as well as the Mentor/Mentee Collaboration environment), taking into account the feedback and outcomes from IO1 and IO2, the Mentoring Lifecycle Model introduced in IO5 and finally the technological competence in the form of tools and components brought in by INNOSYSTEMS. The document at hand is the final version of the respective deliverable "IO3: Design & Development of DEM@ENTORING platform and training material" which has been concluded at the end of the project (May 2021) according to updated work plan. This updated version of the deliverable features a more thorough presentation of the courses that have been finalised along with the Mentor-Mentee Collaboration Environment as introduced by the IO5: Mentoring Lifecycle Model, the gamifications mechanics and the evaluation process and results for the overall platform and training material.



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## 8 Annex A: DEM@ENTORING Content Structure

PART 1, TOPICS			LEARNING OUTCOMES	
1. Introduction to Dementia and Cognitive Disorders (1.1-1.2)			After this section, the mentor should be able to describe the five most common cognitive disorders, and the cognitive domains most commonly affected by a dementia disease.	
2. Behavioural and Psychological Symptoms of Dementia (BPSD) (2.1-2.7)			Knowledge about the most common BPSD associated with cognitive disorder and the most common behaviour management components/strategies.	
3. Psychosocial intervention (3.1-3.4)			Knowledge about psychosocial interventions related to cognitive and multisensory stimulation, physical activity and exercise as well as the use of different welfare technologies.	
4. Risk and Medication Management (4.1-4.4)			Knowledge about strategies for the prevention and treatment of accidents and injuries in the home.	
Outcome, describe	S# and Type	Media Files	Visual Instructions/Developer Notes	Page/Media Text (On Screen)
Introduction to Part 1	Lecture	Video		
1.1 Difficulties in cognition	Lecture Quiz	PPT AAARDR	•	•
1.2 The most common cognitive disorders	Lecture Quiz	PPT AAARDR	•	•
2.1 Challenging behaviours associated with dementia	Lecture Quiz	PPT AAARDR	•	•
2.2 Psychosocial management of BPSD, including a care plan	Lecture Quiz	PPT AAARDR	•	•



2.3 Principles of care for people with dementia regarding BPSD	Lecture Quiz	PPT AAARDR	•	•
2.4 Communication and understanding behaviour	Lecture Quiz	PowerPoint LU	•	•
2.5 Socialization	Lecture Quiz	PowerPoint LU	•	•
2.6 Feeding and nutrition	Lecture Quiz	PowerPoint LU	•	•
2.7 Activity and participation	Lecture Quiz	PowerPoint LU	•	•
3.1 Cognitive stimulation	Lecture Quiz	PowerPoint LU	•	•
3.2 Multisensory stimulation	Lecture Quiz	PowerPoint LU	•	•
3.3 Physical activity and exercise	Lecture Quiz	PowerPoint LU	•	•
3.4 Use of welfare technology	Lecture Quiz	PowerPoint LU	•	•
4.1 Home accidents prevention	Lecture Quiz	PowerPoint LU	•	•
4.2 Physical and pharmacological restraints	Lecture Quiz	PowerPoint LU	•	•
4.3 Abuse	Lecture Quiz	PowerPoint LU	•	•
4.4 Sexuality	Lecture Quiz	PowerPoint LU	•	•

Multiple Choice Questions, see: [www.h5p.org](http://www.h5p.org)

PART 2, E-MENTORING KNOWLEDGE	LEARNING OUTCOMES
1. Adult learning strategies and models (1.1-1.2)	Be able to describe different adult learning strategies and models and different communication methods and strategies useful in mentoring/coaching situations
2. Strategies for facilitating adult learning (2.1-2.4)	Be able to describe different strategies for facilitating adult learning

3. Strategies for online teaching, learning and feedback (3.1)			Be able to describe different strategies for online teaching, learning and feedback	
4. Legal and behavioural aspects of online learning (4.1)			Be able to describe legal and behavioural aspects of online learning	
5. Debriefing and supervision (5.1)			Be able to describe different strategies for debriefing and supervision and the boundaries of an e-mentor	
Outcome, describe	S# and Type	Media Files	Visual Instructions/Developer Notes	Page/Media Text (On Screen)
1.1 Social interaction learning	Lecture Quiz	PowerPoint LU	• Done	•
1.2 Intro on the importance of the learning context	Lecture Quiz	PDF ANS	• Done	•
2.1 Building on previous knowledge	Lecture Quiz	PPT ANS	• Done	•
2.2 Use of the context for learning	Lecture Quiz	PPT ANS	• Done	•
2.3 Use of cases and examples	Lecture Quiz	PPT ANS	• Done	•
2.4 Use of blended learning	Lecture Quiz	PPT ANS	• Done	•
3.1 Methods and strategies for online communication	Lecture Quiz	PowerPoint LU	•	•
4.1 Confidentiality and privacy	Lecture Quiz	PowerPoint (DCHE)	•	•
5.1 Strategies for debriefing and supervision	Lecture Quiz	PPT (DCHE)	•	•

Multiple Choice Questions, see: [www.h5p.org](http://www.h5p.org)

PART 3, E-MENTOR SKILLS	LEARNING OUTCOMES
1. Communication with mentees (1.1-1.2)	Be able to apply and personalize strategies to facilitate learning among the mentees and use the online platform format to support and guide the mentee

2. Strategies to facilitate learning (2.1-2.3)			Be able to apply and personalize strategies to facilitate learning among the mentees	
3. Self-reflection on communication and facilitation skills (3.1)			Be able to apply and reflect upon the own communication and facilitation skills	
Outcome, apply	S# and Type	Media Files	Visual Instructions/Developer Notes	Page/Media Text (On Screen)
1.1 Mentoring process-skills	PPT	AAARD	•	•
1.2 Mentoring skills	PPT	DCHE	•	•
2.1 Guidelines for starting an online mentoring Peer Support Group	PPT	AAARD	•	•
2.2 Use of online platforms to support learning	Lecture, PPT, Video	Video. 36.6	•	•
2.3 Management of material and media on the Moodle platform	Video	Video. Word file. Screenshots. 36.6	•	•
3.1 Self-reflection and feedback	Lecture, PPT	DCHE	•	•

Multiple Choice Questions, see: [www.h5p.org](http://www.h5p.org)



## 9 Annex B: DEM@ENTORING – Quiz, Multiple-choice questions

### 1. Introduction to Dementia and Cognitive Disorders (1.1-1.2)

1.1 Difficulties in cognition	
1.1.1	What is usually the first cognitive function to be affected when a person has a dementia disease?
	1. Language (False) 2. Short-term memory (True) 3. Perceptual-motor function (False)
1.1.2	What is agnosia?
	1. Loss of language skills, including the ability to speak, understand, read or write (False) 2. The person is unable to brush their teeth (False) 3. Inability to recognize things through the senses: sight, sound, taste, touch and smell (True)
1.1.3	What is apathy?
	1. Inability of or lack of interest to initiate activities, or staying involved in a conversation or task (True) 2. Inability to recognize things through senses (sight, sound, taste, touch, smell) (False) 3. Loss of language skills, including ability to speak, understand, read or write (True)
1.2 The most common cognitive disorders	
1.2.1	Which is the most common dementia disease?
	1. Lewy Body Dementia (False) 2. Alzheimer's disease (True) 3. Vascular dementia (False)
1.2.2	What is one of the most common and early symptoms of dementia?
	1. Loss of appetite and wandering (False) 2. Aggression, apathy and deterioration of the ability to verbally communicate (False) 3. Loss of short-term memory and disorientation regarding time and location (True)
1.2.3	How many years can a person with dementia live with the disease?
	1. 2-5 years (True) 2. 5-10 years (False) 3. Hard to predict (True)

## 2. Behavioral and Psychological Symptoms of Dementia (BPSD) (2.1-2.7)

2.1 Challenging behaviors associated with dementia	
2.1.1	What is the best course of action when a person with dementia has sleep disturbances?
	<ol style="list-style-type: none"> <li>1. Exhaust the person until he/she falls sleep (False)</li> <li>2. Discuss the sleep disturbances with the doctor to see if further medication or other interventions are required (True)</li> <li>3. Ignore the symptoms and they go away (False)</li> </ol>
2.1.2	Which of the following is considered as BPSD, commonly seen in persons with dementia?
	<ol style="list-style-type: none"> <li>1. Inability to infer thoughts, feelings or emotions of others (False)</li> <li>2. Elevated self-esteem and grandiosity (False)</li> <li>3. Repetitive behaviour and mood disturbances (True)</li> </ol>
2.1.3	As a caregiver, how would you deal with a person's with dementia irritability?
	<ol style="list-style-type: none"> <li>1. Give the person time to calm down and focus on a pleasant activity (True)</li> <li>2. Impose your opinion, demand the person to stop being agitated (False)</li> <li>3. Give the person time to calm down (False)</li> </ol>
2.2 Psychosocial management of BPSD, including a care plan	
2.2.1	Which of the following are the most appropriate and efficient management strategy for a person with dementia in a psychological or behavioral crisis?
	<ol style="list-style-type: none"> <li>1. Bringing family and friends in order to "cheer up" the person (False)</li> <li>2. Routines for the day with pleasant and planned activities with simple instructions (True)</li> <li>3. Physical exercise regardless of personal wishes to maintain mobility and good health (False)</li> </ol>
2.2.2	How can you communicate with the person with dementia to understand their behaviour?
	<ol style="list-style-type: none"> <li>4. You don't since it's useless to try to communicate (False)</li> <li>5. You let the person with dementia walk around (False)</li> <li>6. You try to recognise patterns in their behaviour (True)</li> </ol>
2.2.3	As a caregiver, how would you deal with a person's with dementia irritability?
	<ol style="list-style-type: none"> <li>1. Give the person time to calm down and focus on a pleasant activity (True)</li> <li>2. Impose your opinion, demand the person to stop being agitated (False)</li> <li>3. Give the person time to calm down (False)</li> </ol>
2.3 Principles of care for people with dementia regarding BPSD	
2.3.1	What are the basic psychological needs of the person?
	<ol style="list-style-type: none"> <li>1. They need to be reassured and not abandoned (False)</li> <li>2. Need for comfort and attachment, inclusion in a group, to be occupied in activity, maintain a sense of identity in continuity with the past and, and the need to love and feel loved (True)</li> <li>3. The person need to be included in a group and occupied in some activities (False)</li> </ol>





2.3.2	Can a formal or informal caregiver try to prevent BPSD?
	1. Yes, by isolating the person from others (False) 2. No, it's impossible to prevent (False) 3. Yes, by recognizing and taking care of psychological needs (True)
2.3.3	How can you take care of a person with dementia regarding BPSD?
	1. You need to understand the profound reason underlying the BPSD to answer in a correct and reassuring way (True) 2. Only pharmacological treatments can be used (False) 3. You should counter the person in an authoritative way (True)
<b>2.4 Communication and understanding behaviour</b>	
2.4.1	For people with dementia behavior is a form of
	1. Negotiation (False) 2. Communication (True) 3. Socialisation (False)
2.4.2	How can you communicate with the person with dementia to understand their behavior?
	1. You don't since it's useless to try to communicate (False) 2. You let the person with dementia walk around (False) 3. You try to recognise patterns in their behaviour (True)
2.4.3	What other factors than the dementia disease can change behavior?
	1. Vision, hearing and pain (True) 2. There are no other factors (False) 3. Animals and pets (False)
<b>2.5 Socialization</b>	
2.5.1	What do we mean by socialization for a person with dementia?
	1. Socialization provides a controlled, yet varied climate of both human and environmental interaction (True) 2. Socialisation for people with dementia includes only joining associations, networks and FaceBook (False) 3. Socialisation for people with dementia is only available in nursing homes and day care centres (False)
2.5.2	What are the four key reasons for socialization of people with dementia?
	1. Gain a greater sense of inclusiveness and belonging, improve brain health, strengthen connection to time and place and enhance and maintain focus (True) 2. Gain a greater sense of inclusiveness and belonging, improve physical health, strengthen connection to time and place and enhance and maintain focus (False)



	3. Gain a greater sense of inclusiveness and belonging, improve brain health, strengthen connection to person and situation and enhance and maintain focus (False)
2.5.3	How do you choose the best time and place for socialization of people with dementia?
	<p>1. Socialization should be planned for the time of day when the person is feeling his/her best. Avoid “sun-downing” and crowded places. (True)</p> <p>2. Socialization can be planned any time of day and when it is most convenient for you. This can be late afternoon and late evenings as well (False)</p> <p>3. Socialization should be planned for the time of day when the person is feeling his/her best, avoiding exercise and physical activities (False)</p>
<b>2.6 Feeding and nutrition</b>	
2.6.1	How do you make the mealtime as pleasant as possible
	<p>1. Serve the person with dementia three large meals per day (False)</p> <p>2. Never use colour contrast of the plate to distinguish the food (False)</p> <p>3. Sit with the person while eating, to create a friendly atmosphere (True)</p>
2.6.2	It's common that people with dementia have trouble swallowing. How can you help?
	<p>1. You serve the person with dementia the same food as everybody else (False)</p> <p>2. You can use a thickening agent and pureed foods rather than thin liquids (True)</p> <p>3. If the person chokes you are not allowed to help with Heimlich manoeuvre (False)</p>
2.6.3	If the person with dementia needs to be fed, how do you best feed them?
	<p>1. Offer one food item at a time. Make sure he/she has swallowed before offering the next bite. Demonstrate and cue eating behaviour (True)</p> <p>2. You don't need to do anything. It is an ordinary meal situation and does not need any preparation (False)</p> <p>3. Take the person to a nice restaurant with many people, which enables socialization and interaction (False)</p>
<b>2.7 Activity and participation</b>	
2.7.1	How can you enhance an activity to help a person with dementia?
	<p>1. By telling them once and then they know how to do it (False)</p> <p>2. By showing them how to do it so that they can imitate me (True)</p> <p>3. By writing instructions so that the person can read and follow them (False)</p>
2.7.2	How can you organize the home environment to facilitate activity?
	<p>1. By letting all things be exposed so that the person with dementia has a lot of clothing, spices etc to choose from (False)</p> <p>2. By using the same colour on everything, so that they don't get distracted (False)</p> <p>3. By removing things so that the person has limited things to choose from. (True)</p>
2.7.3	How can you use the outdoor environment for activity and participation in the later stages of dementia?
	1. People with dementia should never go out since the environment is too complex and difficult to understand. (False)



	<p>2. By visiting well-known places or taking short walks (True)</p> <p>3. By going long walks in the forest so that they exercise their muscles (False)</p>
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### 3. Psychosocial intervention

<b>3.1 Cognitive stimulation</b>	
3.1.1	Cognitive stimulation typically involves a set of tasks designed to reflect:
	1. Physical function (False) 2. Cognitive function (True) 3. Psychological function (False)
3.1.2	When is Cognitive Stimulation Therapy (CST) used?
	1. In the late stage of dementia (False) 2. It is never used in dementia (False) 3. In mild to moderate dementia (True)
3.1.3	What kind of tasks can CST involve?
	1. Physical games, dance and activities, different sounds like music or water, and talking about childhood as well as games (True) 2. CST involves tasks that challenge the person and are totally new to them, like skydiving or bungee jumping (False) 3. CST involves tasks that are relaxing for the professionals (False)
<b>3.2 Multisensory stimulation</b>	
3.2.1	Tactile stimulation for persons with dementia is known to
	1. Improve their appetite (False) 2. Improve their well-being (True) 3. Improve hearing and vision (False)
3.2.2	Olfactory stimulation is considerably more than sensory stimulation such as:
	1. Stimulates the brain, improves cognitive functioning and is calming (True) 2. Olfactory stimulation is only good for dry skin and other skin conditions (False) 3. Olfactory stimulation is never used in dementia care, only in child care (False)
3.2.3	What is a Snoezelen room?
	1. It is a room filled with coloured calming lights for staff to relax in during their work shift (False) 2. It is a room with a bed where staff can take a nap “snooze” during their work shift (True) 3. A Snoezelen Room is a therapeutic environment created to provide stimulation for people with dementia (False)
<b>3.3 Physical activity and exercise</b>	
3.3.1	Why is it important to be physically active when you have a dementia disease?
	1. They have to be able to take care of themselves (False) 2. Physical activity stimulates the cognitive function and can slow down the progression of the disease (True)



	3. Otherwise they won't eat (False)
3.3.2	What can you do to stimulate physical activity?
	1. Play Sudoku or Jigsaw puzzles (False) 2. Put on the music and dance (True) 3. Buy new shoes (False)
3.3.3.	Which is the type of physical activity that is most positive for people with dementia?
	1. Slow walks without increasing pulse (False) 2. High intensive, anaerobic training (False) 3. Aerobic training with increasing pulse (True)
<b>3.4 Physical activity and exercise</b>	
3.4.1	Why is it important to be physically active when you have a dementia disease?
	4. They have to be able to take care of themselves (False) 5. Physical activity stimulates the cognitive function and can slow down the progression of the disease (True) 6. Otherwise they won't eat (False)
3.4.2	What can you do to stimulate physical activity?
	4. Play Sudoku or Jigsaw puzzles (False) 5. Put on the music and dance (True) Buy new shoes (False)
3.4.3.	Which is the type of physical activity that is most positive for people with dementia?
	1. Slow walks without increasing pulse (False) 2. High intensive, anaerobic training (False) 3. Aerobic training with increasing pulse (True)



## 4. Risk and medication management

4.1 Home accidents prevention	
4.1.1	How can you arrange the home environment to prevent a fall and enhance activity?
	<ol style="list-style-type: none"> <li>1. To see to that the light bulbs aren't too strong so that the person with dementia doesn't get dazzled (False)</li> <li>2. Remove loose carpet and see to that the light is strong (True)</li> <li>3. Light candles and put many rugs on the floor to make it cosy (False)</li> </ol>
4.1.2	Why are people with dementia extra vulnerable to hazards in the home?
	<ol style="list-style-type: none"> <li>1. They are old and lack social contacts (False)</li> <li>2. Their cognitive decline makes it difficult to orientate in the home (True)</li> <li>3. They become colour-blind so it is difficult for them to see objects (False)</li> </ol>
4.1.3	What are the main risks for the person with dementia after a fall?
	<ol style="list-style-type: none"> <li>1. They won't be able to walk the stairs afterwards (False)</li> <li>2. They will become afraid of doing things, and lose their strength, stamina and balance (True)</li> <li>3. They stop doing their laundry and need help from others when going shopping (False)</li> </ol>
4.2 Physical and pharmacological restraints	
4.2.1	When is consent for restraints needed from a person with dementia?
	<ol style="list-style-type: none"> <li>1. You can decide for yourself if it's for protective purposes (False)</li> <li>2. You always need consent even though it's for protective purpose (True)</li> <li>3. You don't need consent for protective purpose (False)</li> </ol>
4.2.2	What are the negative consequences of physical and pharmacological restraints?
	<ol style="list-style-type: none"> <li>1. Physical and pharmacological restraints only affect the staff and informal caregivers (False)</li> <li>2. It may have negative impact on the person's dignity and self-esteem, which is already fragile (True)</li> <li>3. There are no negative consequences of these restraints (False)</li> </ol>
4.2.3	How do we avoid the use of physical and pharmacological restraints?
	<ol style="list-style-type: none"> <li>1. It is not avoidable (False)</li> <li>2. With person-centred care (True)</li> <li>3. Forcing or limiting False)</li> </ol>
4.3 Abuse	
4.3.1	People with dementia are more at risk of fraud than other people. Which signs of fraud should you be alert to?
	<ol style="list-style-type: none"> <li>1. There is lots of food in the refrigerator (False)</li> <li>2. Invoices and cash withdrawals of high amounts of money (True)</li> <li>3. There is more mail than usual (False)</li> </ol>
4.3.2	Physical abuse is common. Which signs should you be aware of?



	<ol style="list-style-type: none"> <li>1. Broken bones and other injuries (False)</li> <li>2. Clothes that have been torn (False)</li> <li>3. Bruises and scratches (True)</li> </ol>
4.3.3	Psychological abuse is not uncommon. What could be the signs?
	<ol style="list-style-type: none"> <li>1. The person has nightmares and stops eating and doesn't take the medication (False)</li> <li>2. The person changes behaviour and might become afraid of certain people (True)</li> <li>3. The person wants to go out for a walk all the time (False)</li> </ol>
<b>4.4 Sexuality</b>	
4.4.1	What is the definition of sexuality?
	<ol style="list-style-type: none"> <li>1. It's only sexual intercourse (False)</li> <li>2. Sexuality includes sexual intercourse and fantasy but also the experience of our gender, sexual identities or being asexual (True)</li> <li>3. It's only sexual fantasies (False)</li> </ol>
4.4.2	Does the dementia disease affect the person's sexuality?
	<ol style="list-style-type: none"> <li>1. Yes, always and it's the same for all persons with a dementia diagnose (False)</li> <li>2. This varies and sexuality can be difficult for the person with dementia to express (True)</li> <li>3. No, never and it's the same for all persons with a dementia diagnose (False)</li> </ol>
4.4.3	Can any ethical issues arise by a dementia disease?
	<ol style="list-style-type: none"> <li>1. No, never and it's the same for all persons with a dementia diagnose (False)</li> <li>2. There may be issues related to consent and ethical boundaries, complicated by the dementia disease (True)</li> <li>3. Yes, always and it's the same for all persons with a dementia diagnose (False)</li> </ol>



## 5. Course II -Mentoring knowledge Test and Quizzes

Question	Options <sup>6</sup>
1. Why is the social context important for the mentor-mentee relationship?	<ul style="list-style-type: none"> <li>1. It affects what people learn.</li> <li>2. It affects how people learn.</li> <li><b>3. It affects both how and what people learn.</b></li> </ul>
2. Why should mentors take into account the mentees' background before starting the programme?	<ul style="list-style-type: none"> <li>1. It helps the mentor assess whether the mentee really needs support or not.</li> <li><b>2. It helps mentors adapt the learning material, so that the mentees can better understand the context for their mentoring programme.</b></li> <li>3. It helps mentors shorten the mentoring programme, thus saving time for themselves and the mentees.</li> </ul>
3. What is a learning context?	<ul style="list-style-type: none"> <li>1. It includes the characteristics of the place/s where people learn.</li> <li><b>2. It includes all the external factors that provide meaning to someone's learning experience and affect the learning performance.</b></li> <li>3. It includes the learning climate and how much the learner feel part of the learning experience.</li> </ul>
4. What do we mean by blended learning?	<ul style="list-style-type: none"> <li><b>1. It is an approach, which combines online educational opportunities with traditional place-based classroom methods.</b></li> <li>2. It is an approach, which combines different online adult learning strategies.</li> <li>3. It is an approach, which combines different online learning experiences (simulations, case studies, etc.).</li> </ul>
5. Confidentiality is an important component of a successful mentor-mentee relationship. How can it be ensured?	<ul style="list-style-type: none"> <li><b>1. It is important for the mentor and mentee to be able to have an open and honest conversation about what they expect in terms of confidentiality.</b></li> <li>2. It is key that legal guidance is provided to both the mentor and the mentee before starting the relationship.</li> <li>3. A confidentiality template should be signed by the mentee before starting the mentoring relationship.</li> </ul>

<sup>6</sup> Correct answers indicated in bold.



## 6. Course III E-mentoring skills Test and Quizzes

1. Why is self-reflection useful as a mentor?	<ol style="list-style-type: none"> <li><b>It prompts thinking about my role as a mentor, skills and knowledge, and how a mentor influences and impacts on the mentee's development.</b></li> <li>It allows me to think about my strengths and opinions and forward them to the mentee.</li> <li>It helps me to evaluate the mentor-mentee relationship and make adjustments to it.</li> </ol>
2. Why should a mentor give feedback to the mentee?	<ol style="list-style-type: none"> <li><b>Feedback allows the mentor to acknowledge your mentee's strengths and to motivate the mentee to work on areas of weakness.</b></li> <li>Feedback to the mentee is required as part of the formal evaluation procedure in order for the mentor to become an advanced mentor.</li> <li>Feedback allows the mentee to reflect on weaknesses in order to change the behavior or to read more about what skills are necessary to have as a mentor.</li> </ol>
3. There are different ways of working as a mentor. Which ones are correct?	<ol style="list-style-type: none"> <li><b>Counselling, virtual/e-mentoring, coaching</b></li> <li>Counselling, role model, e-mentoring</li> <li>E-mentoring, lecturing, coaching</li> </ol>
4. Why is trust important in a mentor-mentee relationship?	<ol style="list-style-type: none"> <li>Without trust the mentee will not reveal their personal issues for the mentor</li> <li>Trust is necessary in order to get good scores as a mentor</li> <li><b>Without trust the mentees can't develop their strengths and weaknesses and move on with their life.</b></li> </ol>
5. What are the core mentoring skills?	<ol style="list-style-type: none"> <li><b>Active listening, trust building, encouraging, goal identification</b></li> <li>Feedback, inspiration, trust building, encouraging</li> <li>Evaluation, inspiration, trust building, active listening.</li> </ol>

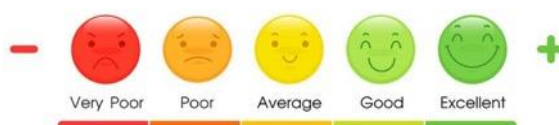


## 10 Annex C: DEM@ENTORING – Evaluation Questions on the Platform and Content

### 10.1 Assessment questionnaire of the Platform

**Scale:**

- 1: Very Poor
- 2: Poor
- 3: Average
- 4: Good
- 5: Excellent



Questions & Answers					
The dem@entoring online ecosystem was easy to access and easy to use.					
Please explain...					
The extent of the content or its duration was adequate.					
Please explain...					
The dem@entoring learning material was easy to understand.					
Please explain...					
The educational method used was appropriate.					
Please explain...					
I feel ready to apply what I've just learnt.					





Please explain...					
The dem@entoring questions and testing approach after each section was helpful to understand the learning material.					
Please explain...					
The dem@entoring mentor-mentee collaboration platform was easy to use.					
Please explain...					
The mentor search facility helped me find the information I was looking for quickly and effectively.					
Please explain...					
The communication facilities within the dem@entoring mentor-mentee collaboration platform were sufficient.					
Please explain...					
The rewarding and gamification aspects of the platform was adequate and indicative.					
Please explain...					

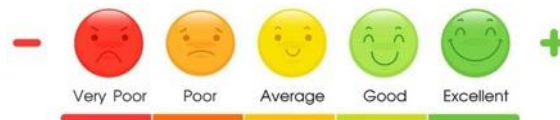


## 10.2 Assessment questionnaire of the Learning Material

Please Evaluate each course topic from a scale of 1 to 5

**Scale:**

- 1: Very Poor
- 2: Poor
- 3: Average
- 4: Good
- 5: Excellent



### Course I: Knowledge and understanding of dementia diseases

1. Introduction to Dementia and Cognitive Disorders
  - 1.1 Difficulties in Cognition
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 1.2 The most common Cognitive Disorders
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
2. Behavioral and Psychological Symptoms of Dementia (BPSD)
  - 2.1 Challenging behaviors associated with dementia
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 2.2 Psychosocial management of BPSD, including a care plan
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 2.3 Principles of care for people with dementia regarding BPSD
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent



- 2.4 Communication and understanding behavior
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 2.5 Socialization
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 2.6 Feeding and nutrition
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 2.7 Activity and Participation
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 3. Psychosocial intervention
  - 3.1 Cognitive stimulation
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 3.2 Multisensory stimulation
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 3.3 Physical activity and exercise
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 3.4 Use of welfare technology
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
- 4. Risk and Medication Management



- 4.1 Home accidents prevention
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 4.2 Physical and pharmacological restraints
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 4.3 Abuse
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 4.4 Sexuality
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent

## Course II: E-mentoring knowledge

- 1. Adult learning strategies and models
  - 1.1 Social interaction learning – “learning with others”
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 1.2 The role of the physical, organizational and psychosocial context learning
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
- 2. Strategies for facilitating adult learning
  - 2.1 Building on previous knowledge
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 2.2 Use of context for learning



- 1: Very Poor
- 2: Poor
- 3: Average
- 4: Good
- 5: Excellent
- 2.3 Use of cases and examples
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 2.4 Use of blended learning
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 3. Strategies for online teaching, learning and feedback
  - 3.1 Methods and strategies for online communication
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 3.2 Strategies for providing feedback online
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 3.3 Strategies for setting up a learning-friendly situation
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
- 4. Legal and behavioral aspects of online learning
  - 4.1 Ownership of data and material
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 4.2 Privacy and integrity
    - 1: Very Poor
    - 2: Poor



- 3: Average
- 4: Good
- 5: Excellent
- 4.3 Malpractice issues
  - 1: Very Poor
  - 2: Poor
  - 3: Average
  - 4: Good
  - 5: Excellent
- 5. Debriefing and supervision
  - 5.1 Strategies for debriefing and supervision
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 5.2 Available resources for debriefing and supervision
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent

### Course III: E-mentoring skills

- 1. Communication with mentees
  - 1.1 How to establish a confidential and friendly learning atmosphere
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
- 2. Strategies to facilitate learning
  - 2.1 Use of online platforms to support learning
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 2.2 Moodle features and design
    - 1: Very Poor
    - 2: Poor
    - 3: Average
    - 4: Good
    - 5: Excellent
  - 2.3 Management of material and media on the platform







- 1: Very Poor
- 2: Poor
- 3: Average
- 4: Good
- 5: Excellent

3. Self-reflection on communication and facilitation skills

3.1 Self-reflection and feedback

- 1: Very Poor
- 2: Poor
- 3: Average
- 4: Good
- 5: Excellent