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# “Eliminating Social Exclusion” (EliSE) Nr. 2019-1-LV01-KA204-060427

## Intellectual Output 2 – A Needs Analysis By Saricam Halk Egitimi Merkezi





## 1. Executive Summary

The main objective of this report is to present a field research on different features a good e-learning platform should have to be able to create an innovative way of learning and teaching. The results will help to work on the proper ICT infrastructure design, sets out functions, requirements, and constrains.

The main tasks include:

- Identification of users' needs
- Definition of the system functionalities

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## 3. Introduction

This IO concerns the realization of the ICT infrastructure, namely the smart learning environment. It integrates learning solutions to make learning context sensitive and customized in order to accelerate and enhance the learning processes.

Our learning environment provides users with collaborative tools designed for this specific purpose as well as services such as forum, links, wiki, etc. and a repository of best practices.

We adopt a modular architecture for the software components in order to maximize the flexibility of our solution. Our learning environment provides learners with the possibility to be supported by “intelligent digital agent” and, accordingly, choose from different service options at different learning stages. On this purpose, we use “learning analytics” to build algorithms by which to customize tasks, evaluation, and contents delivery.

We adopt a modular architecture for the software components in order to maximize the flexibility of our solution. The environment is open to the contribution of external experts as well as testimonials in order to attract the attention of learners.

All partners will participate in the ICT infrastructure design, which sets out functions, requirements, and constrains.

The tasks include:

- Identification of users' needs
- Definition of the system functionalities
- Description of the platform architecture
- Design of Software



#### **4. Identification of Users' Needs**

It is important for the quality of the distance learning process high substantive level and appropriate portion of educational materials. Their quantity should not differ from the amount of material that can be discussed during classes conducted face to face. Too much content will be too large opportunities for learners and can effectively discourage them from working.

##### **A Needs Analysis**

This needs analysis is related to the online learning infrastructure.

Primary users of the online learning infrastructure:

- Partners participating in the project
- Learners

Partners of the project will use the online learning infrastructure to:

- communicate among them
- exchange of learning materials
- prepare learning materials
- interact with people who are interested in learning content

The target groups that will be interested in learning content:

- Learners participating in the training activities of the project (short training activity, training courses);
- Social educators and stakeholders interested in project methodology, educational approach, and the use of learning materials.

The online learning infrastructure must meet the needs of all users above.

##### **Learners' Needs**

Learners' needs are related to three things:

- Use of the learning platform
- Use of distance learning tools
- Availability of customized learning paths

Learners should access and use e-learning lectures organized in learning units. Learners should access learning units according to their learning capacity.

An e-learning platform should be available for this purpose. It should be accessible anytime and anywhere. It should also be compatible with any browser and any access device, which ensures that all page items and functions are arranged as complete and original page design.

Learning content should be organized to allow customized learning.

A range of devices and software tools are required to attend distance learning classes. It should be easy to use to facilitate learners' activities. In addition, a high level of interaction should be provided to ensure participant learning and peer learning, as envisaged in the project proposal.

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### **Partners' Needs**

The online learning infrastructure should provide partners with a messaging app, collaboration tools, and forums and wiki creation apps.

A pool for project documents should be implemented using free software such as Google Drive, Dropbox.

A repository of best practices will be useful.

### **Customized Learning Paths**

The EliSE project envisages the implementation of:

- customized learning paths
- a community platform based on a smart learning environment and a paradigm like crowdsourcing.

Customized learning paths should be realized taking into account learners' abilities.

When implementing learning modules, partners should identify the information needed to understand the learning units. Accordingly, they should create integrative materials to fill the final gaps of the learners.

A web page showing the list of learning modules and related learning units should be implemented. Users are informed about the information necessary to understand the various learning units, if any. Accordingly, users can obtain the necessary information to understand the content of a particular learning by choosing links of integrative materials.

In addition, an application should be implemented to analyze learners' behaviors and develop a learning strategy. For this purpose, each learning unit must contain a post test. The test results should be analyzed to identify the difficulties of the relevant learners and to develop relevant learning units, add additional learning materials or suggest internet searches.

Finally, the learning infrastructure should allow students to collaborate to achieve their learning goals. For this purpose, functionalities should be implemented in which learners can get suggestions and advice from other learners to solve a learning problem. In this context, a blog or similar application can be activated by learners.

## **5. Definition of the system functionalities**

Researchers define that the main features of a good quality learning management system are:

- Integrated virtual classroom in LMS
- Technical support in LMS
- Customizable and multi-lingual
- Course management in LMS
- Communication management in LMS
- Reports in LMS
- SCORM compatibility
- Data storage in LMS
- Assessment creation and management

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To this main features, our group suggest additional features:

- video conferencing tools
- instant messaging
- social media
- applications for creating presentations
- cloud disks
- graphics creation applications
- text editors
- web browsers, content search engines
- test creation tools
- contact management tools
- calendar management tools
- video conferencing tools

### **E-learning platform**

The e-learning platform should provide an uncomplicated interface with a complete set of learning functions and an easy drag and drop functionality.

Moodle is “a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments.” It is Open Source software, thus freely available, and helps teachers to organize their teaching process in a constructivist learning setting. It is therefore not only a course management system but a possibility to create personal learning environments.

For this purpose, the Moodle platform could be adopted and RTA could be made it available for free.

Moodle meets learners' needs as it provides the following features:

- Moodle is modular, dynamic and enables collaborative, communicative and creative work in terms of a constructivist teaching and learning model.
- Moodle has the advantage that the different resources, activities and blocks offered by the learning platform can be used separately and independently of each other.
- Moodle courses are characterized by a consistent structure and consist of three areas: the header, with the course title and a navigation path, the side panels on both sides, where the blocks are situated and the central part that can be filled with text, study resources and modules. These three areas are created by default and can be filled with content.
- Moodle enables the implementation of activities, the distribution of resources and the adding of blocks. On the one hand it offers possibilities of rather static, although multimedia data distribution; on the other hand it can be seen as a platform for dynamic communication and collaboration, for evaluation and organization, which certainly can be seen as one of the most important advantages of Moodle.

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## 6. Conclusion

The ICT infrastructure should give the possibility to post multimedia materials related to the content of the course, provide learners with information on the program of classes, contact with learners in the form of an exchange of text messages to solve current problems, conduct virtual consultations in the form of video conferences, verification of learners knowledge, individualize the learning process and motivating them to learn.

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