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NEXT – Digital Transformations for Supporting Next-Generation Labour

Deliverable D3.1

NEXT - Study Learning Environment Architecture

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Document History

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1.3	27.02.2025	Tomáš Zeman	ČVUT	Final document revision

Deliverable Description

This is a PDF document that presents the description of the NEXT-Study learning environment.

1 Introduction

The present document presents the description of the NEXT-Study learning environment. In the NEXT project we are developing a set of 26 learning materials in English. We localize selected ones into Ukrainian or other languages. We are developing a learning environment for these learning materials.

In this document we describe the structure of a typical learning material and the design of the learning environment itself

2 Structure of the Learning Materials

Individual learning materials are developed by different authors or author teams. Our aim is that these materials should have a similar structure. This homogeneity across learning materials will simplify their use by students. Learners will be able to switch among different learning materials without having to get used to the different layout arrangements. In this way, learning objectives can be achieved more easily.

In terms of content, the learning materials are divided into four areas:

1. Digital Technologies (13 learning modules)
2. Soft Skills and Digital Ethics (6 learning modules)
3. Mental Health Awareness (4 learning modules)
4. Legal Aspects in Digital Environments (3 learning modules)

The main text part of the learning material is composed of so-called blocks. Blocks represent a coherent part of the text, e.g. definition, example, advantages, disadvantages, note, summary, etc. These blocks are differentiated in the final web representation by their colour and a suitable text note. Students can navigate the text very well. The text blocks may appear in different parts of the learning material.

The text part of the learning material has several sections, some of which contain metadata about the learning material. The most important items include: title, annotation, objectives, keywords, date of creation, recommended study time, language of the material, license, resources for mind map and references. These sections should be included in every learning material.

The learning materials are published online (on the web). The presentation is responsive, so it is possible to use a personal computer, laptop, tablet or mobile phone for studying. The materials do not only contain static objects. Thanks to the online format, the following types of content are included: texts, images, tables, charts, videos, interactive elements, worksheets and tests.

3 TechPedia

The NEXT project takes advantage of the Techpedia web platform that ČVUT developed within its previous projects. The purpose of this platform is to ensure a better quality of teaching and student experience by offering a wide portfolio of modern learning materials. In principle, Techpedia (<http://techpedia.eu/>) is an electronic “bookstore”, the content of which is freely available. The learning packages cover different areas, and they are provided in different languages. The learning packages may include interactive elements, multimedia elements, advanced objects (AR/VR/3D), worksheets and self-assessment tests. The user environment is localized into multiple languages including Ukrainian.

Figure 1 shows the basic screen of the TechPedia project [1].

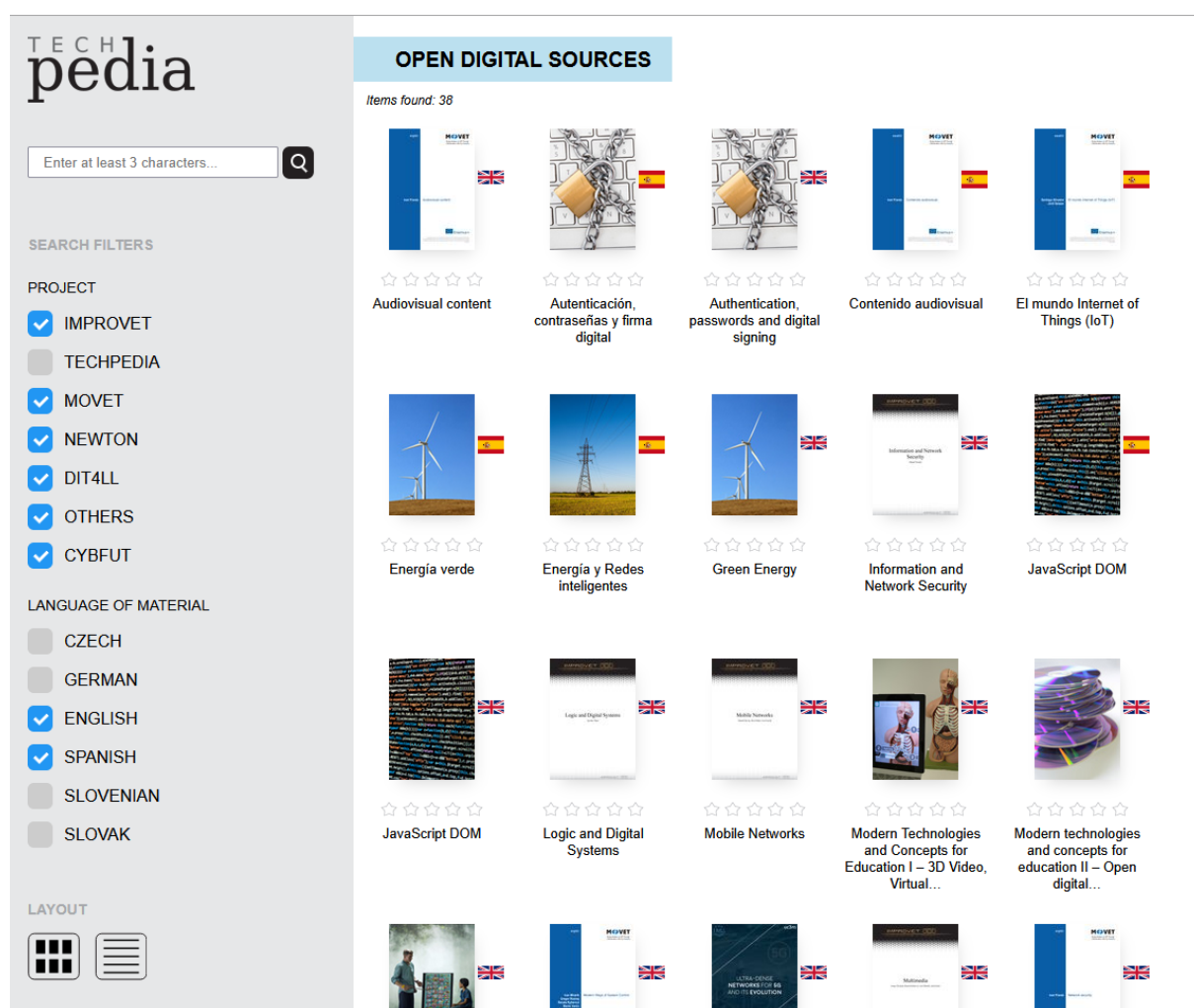


Figure 1: Techpedia webpage

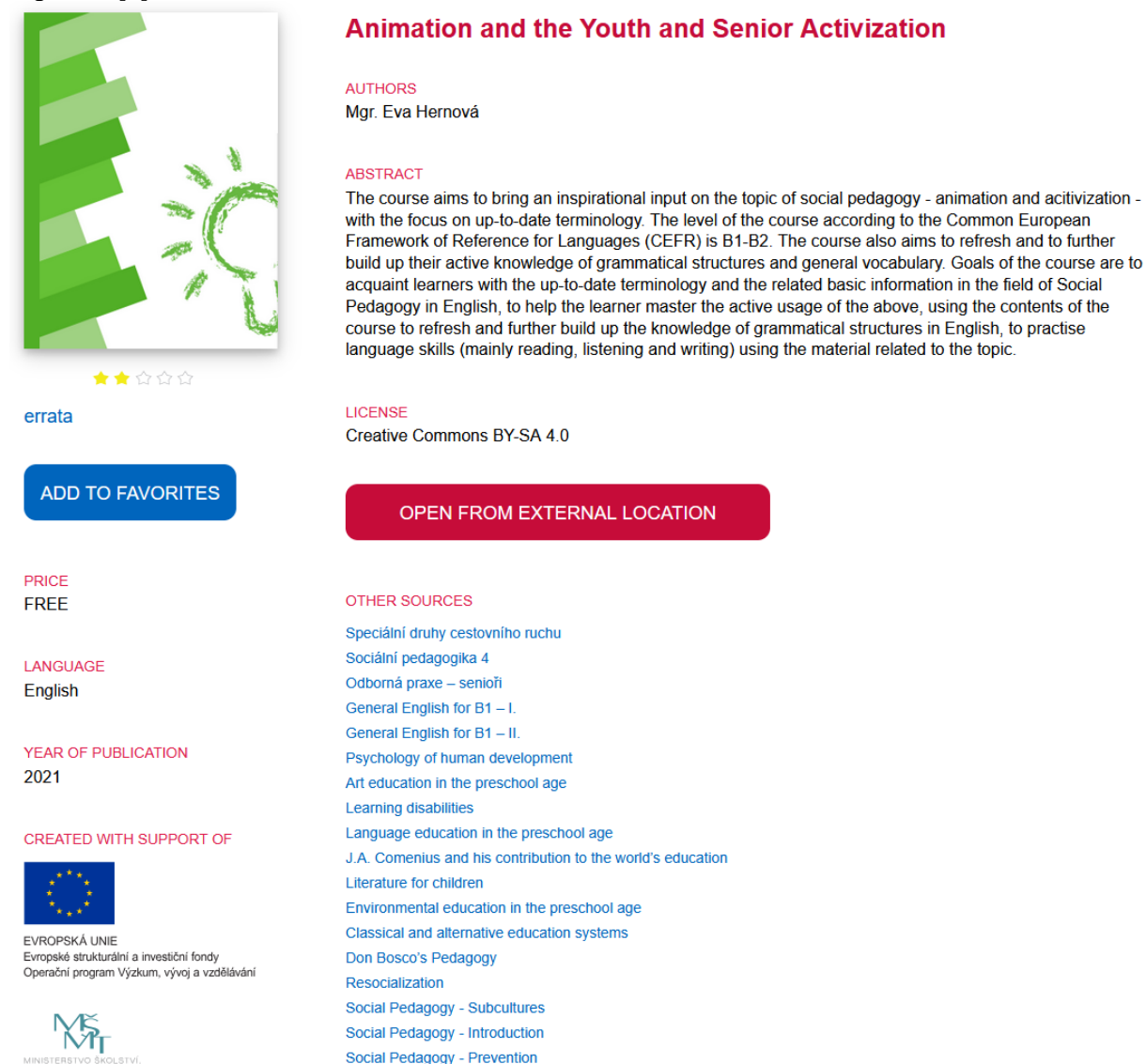
4 NEXT-Study Learning Environment

Based on the Techpedia platform, we are developing the NEXT-Study learning environment. NEXT-Study learning environment is available on the website <https://techpedia.eu/next/>. For this purpose, we are upgrading the Techpedia platform in several ways. Through the NEXT-

Study learning environment, it will be possible to access multiple learning resources available in different locations.

We will also implement a mind map in the learning environment. Using the mind map, students will be able to better organize their own study process.

We also expect to include relevant links to other learning resources in the metadata area of each learning material in an automated way. An example of such an organization is shown in Figure 2 [2].



Animation and the Youth and Senior Activization

AUTHORS
Mgr. Eva Hernová

ABSTRACT
The course aims to bring an inspirational input on the topic of social pedagogy - animation and acitivization - with the focus on up-to-date terminology. The level of the course according to the Common European Framework of Reference for Languages (CEFR) is B1-B2. The course also aims to refresh and to further build up their active knowledge of grammatical structures and general vocabulary. Goals of the course are to acquaint learners with the up-to-date terminology and the related basic information in the field of Social Pedagogy in English, to help the learner master the active usage of the above, using the contents of the course to refresh and further build up the knowledge of grammatical structures in English, to practise language skills (mainly reading, listening and writing) using the material related to the topic.


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MLÁDEŽE A TĚLOVÝCHOVY

OTHER SOURCES

- [Speciální druhy cestovního ruchu](#)
- [Sociální pedagogika 4](#)
- [Odborná praxe – senioři](#)
- [General English for B1 – I.](#)
- [General English for B1 – II.](#)
- [Psychology of human development](#)
- [Art education in the preschool age](#)
- [Learning disabilities](#)
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- [Don Bosco's Pedagogy](#)
- [Resocialization](#)
- [Social Pedagogy - Subcultures](#)
- [Social Pedagogy - Introduction](#)
- [Social Pedagogy - Prevention](#)

Figure 2: Other resources referenced by a learning material (example)

5 Encapsulation of Learning Materials and TechPedia Portal

As described above, the individual learning materials (learning resources) are integrated into the “NEXT-Study” environment, which is based on a modified TechPedia system.

However, in the NEXT project we plan a higher level of integration, where the modified TechPedia system (or NEXT-Study learning environment) will be integrated into a higher hierarchical structure, which will be the NEXT collaborative environment. This integration will allow the project partners to communicate with each other during the learning process.

In this philosophy we assume the existence of another higher hierarchical level, which will be the overarching environment, integrating all parts and functions of the developed system. The complete architecture is illustrated in Figure 3.

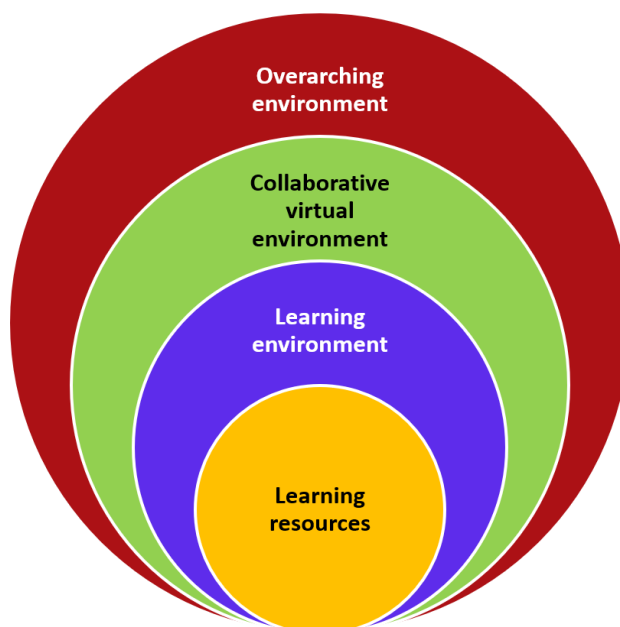


Figure 3: NEXT superstructure

6 References

- [1] TechPedia [online], 2017. Praha [cit. 2025-02-16]. Available from: <http://techpedia.fel.cvut.cz>
- [2] VOV Inovation [online], 2020. Praha [cit. 2025-02-16]. Available from: <https://www.vovcr.cz/portal/>

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