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## **Video Supported Vocational Education and Training in Environmental Protection**

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**Abstract.** The digital learning resources and the e-learning play nowadays an essential role in vocational education and training (VET). Internet provides an exponentially growing number of freely accessible vocational training materials on different topics and in different fields of practice. However, the materials are not structured adequately in order to support international collaboration among the stakeholders. To turn information into knowledge and knowledge into practice, the e-learning platform developed has the aim to validate the data collected over the Internet and to contextualize and communicate it. The current paper presents the concept of creating the e-learning platform and implementing educational videos as supportive tools into vocational education and training in the field of environmental protection. This is a part of the intellectual outputs created on VIVET project: “Video Supported Vocational Education and Training” within the frame of Erasmus+ Strategic Partnership project (No. 2016-1-DE02-KA202-003465) coordinated by FORUM Berufsbildung – Berlin, Germany in partnership with vocational and adult training institutions, higher education institutions and NGOs from Bulgaria, Germany, Italy and Spain. Being the initiators of such an important project, the transnational

consortium plays a leading role in fostering innovative solutions for vocational education and training within Europe. The role of the University of Agribusiness and Rural Development (UARD) within the project is to design a training course in Environmental Protection.

**Keywords:** e-learning, VET, environmental protection.

### **Introduction**

Vocational education and training (VET) is a key factor for getting employment. The digital learning resources and the e-learning play nowadays an essential role in VET. Internet provides an exponentially growing number of freely accessible vocational training materials on different topics and in different fields of practice. However, the materials are not structured adequately in order to support international collaboration among the stakeholders. The VIVET e-learning platform developed has the aim to validate the data collected over the Internet and to contextualize and communicate it. The current paper presents the concept of creating the e-learning platform and implementing educational videos as supportive tools into vocational education and training in the field of environmental protection.

The project fosters inclusion because VET-students and other young communities will be introduced in using videos and other training material online for their careers. The project is designed to be of a special interest for refugees as it is helping them to obtain basic and qualified skills needed for working positions in Europe and their home-countries.

### **Material and methods**

The current paper presents results based on the current developments and implementation of the intellectual outputs carried out within the frame of the Erasmus+ Strategic Partnerships for vocation education and training Project (No. 2016-1-DE02-KA202-003465) titled: "Video Supported Vocational Education and Training" (VIVET) developed on KA2 - Cooperation for Innovation and the Exchange of Good Practices. The project is coordinated by FORUM Berufsbildung – Berlin, Gerny. The partnership consists of institutions from different EU member states (Bulgaria, Germany, Italy and Spain). The project started in 2016 and it has 3 years of duration.

The objective of this paper is to provide:

- ✓ Introduction to VIVET project – objectives, target groups, intellectual outputs;
- ✓ VIVET E-learning platform – functionality;
- ✓ E-learning courses, topics and videos;
- ✓ Training course in Environmental protection – knowledge, skills and competences.

The project offers innovative education by boosting digital integration and overcoming the digital divide. The systematic integrating of open videos from the internet into existing courses will achieve more interesting, more visual, more demonstrative lessons. The VIVET project has created as an internet platform, collecting and delivering vocational videos and electronic training material in different languages at different levels. The use of the platform and its videos will be free of charge with easy access for everyone. However by filtering the already existing enormous supply of videos available in the internet VIVET will offer a most necessary

pre-selection. To ensure a high quality of the material it is approved a hierarchically structured evaluation system combining technical selection procedures with human expertise, applying EREC (Electronic training Resources Evaluation Criteria). Due to the EREC quality assurance system which operates at two stages (appreciation of users; assessment by sectorial experts), the materials gathered by the crawler are accurately selected on the basis of clearly defined criteria, in terms of accessibility, usability, didactic worth and knowledge levels.

The creation of a repository and a platform hosting selected and evaluated videos form a new training instrument. The project developed four pilot training curricula on different subjects and implemented systematically evaluated videos into trade-related training units. These serve as blue prints for further trades.

## **Results and discussion**

### ***Introduction to VIVET project – objective, target groups, intellectual outputs***

The main VIVET project **objective** is to create an internet platform, collecting and delivering vocational videos and electronic training material in different languages at different levels. The platform is offering innovative education by boosting digital integration and overcoming the digital divide. The systematic integrating of open videos from the internet into existing courses intends to achieve more interesting, more visual, more demonstrative lessons. The planned project addresses the evident needs by providing a comprehensive solution to ameliorate access, improve selection and enlarge the use of vocational knowledge resources available online for teachers, trainers, students and learners.

The project has developed an online-library with vocational videos and other vocational learning resources from across Europe. It collects, categorizes, rates and evaluates videos available from different sources. Afterwards, it will develop blended (during the second half of the project life) learning courses for refugees and integrate the collected materials into the learning units created. Finally the project partners will train refugees and teachers with the course material.

**Target groups** - The platform is designed to train young students, unemployed people and refugees. During the second half of the project, in collaboration with refugee organizations, the partner organizations are obliged to inform about the project and the platform and to organize the trainings. The involvement of Interested persons will be based on a selected procedure for: 1/. Teachers; 2/. Professionals and 3/. Refugees. The aim is to create a sustainable infrastructure platform and collaborative network guaranteeing self-assistance within heterogeneous groups, built up with members capable to support each other and to run widely independent training spots. The participants will be actively involved into the further development of the project: They will help to develop and translate learning contents, and they will play an essential role in selecting and evaluating videos and disseminating the project among other refugees.

**Intellectual outputs** – The following intellectual outputs are planned to be implemented at the end of the project:

- ✓ Learning Platform based on a preliminary developed Learning Platform Concept;
- ✓ Quality Assurance Guidelines EREC (Electronic training Resources Evaluation Criteria);

- ✓ Pilot trainings in the **four topics**:
- Basic Health and Geriatric Care (HC),
- Organic Agriculture (OA),
- IT-Capabilities and Cyber Security (CS);
- **Environmental Protection (EP).**

### ***E-learning Platform***

The learning platform has been developed based on a concept. The developing process of the learning platform is under permanent supervision and documentation in order to be target oriented and to provide the members of the technical team with tangible advice on how to implement the concept. The concept is adapted based on the developments of the internet and the changes suggested by the partners thus it will be revised regularly. All project activities, information about the project's aims and objectives will be permanently published online.

The use of the platform and its videos will be free of charge with easy access for everyone. However by filtering the already existing enormous supply of videos available in the internet VIVET will offer a most necessary pre-selection. The creation of a repository and a platform hosting selected and evaluated videos will form a new training instrument. The project will develop four pilot training curricula of different trade subjects and implement systematically evaluated videos into trade-related training units. These will serve as blue prints for further trades. The training materials and resources for self-study (lectures, videos, images, graphics, additional materials, literature, essays, case studies, essay questions to generate tests, etc.) are uploaded to the Internet-based system for distance e-learning. Communication between the lecturer/tutor and students can be done via synchronous and asynchronous forms of communication: group consultations to students, filling out online forms / tests and exams / real-time forum, email, chat, etc.

### ***Training course in Environmental Protection***

**Overview of the training course** - The training development in Environmental Protection is a subject of the project Intellectual Output (IO7) on which the University of Agribusiness and Rural Development (UARD) is the leading organization. According to the purpose of this IO, the UARD team works on the tasks related to choose, check and inset training materials, establish themed sites and learning units. The units are developed in regards to the specific needs of refugees with examples that fit their experience – their level of knowledge, their level of language, their personal experience and interest. The intention is that UARD will give access to an existing virtual platform that has been created in connection with the National project “Development of electronic forms of distance learning in the University of Agribusiness and rural development”. There are teaching materials on the subject from other national and international projects that have already been elaborated and can be utilized to create the learning material.

**The aim of the training in Environmental Protection** is to provide an interesting, accessible introduction to environmental issues for students from a variety of backgrounds combining a broad, interdisciplinary approach that provide both natural sciences and human dimensions of environmental issues. The purpose of this course is to provide an interesting, accessible introduction to environmental

issues for students from a variety of backgrounds combining a broad, interdisciplinary approach that both natural sciences and human dimensions of environmental issues.

**Training features:**

**Duration:** 80 hours / 1 month

**Structure:** 40 hours of Lessons + 40 hours Self Learning Activities

**Level:** Intermediate

**Scope:** 6 courses

**Completion:** Written examination /test/

**Qualification:** EQF Level 3

**Field:** Environment, Ecology, Sustainable Development

The purpose of the VET in Environmental Protection is to raise young people's awareness that the environmental neglect will lead to scarcity of resources and general deterioration of their quality of life. Integration of environmental topics into VET is with growing importance. Since the knowledge concerning the environment is with international importance, the development of modules covering environmental issues is with big significance. In the field of water protection, recycling and energy efficiency new skills are needed. Besides, the occupations with environmental focus are gradually recognized by the business organizations. Most of the topics are directly related to business and economic activity, such as reduction of pollution, waste management, energy management and the development of a sustainable agriculture. Other items on the list demand their deeper integration into the educational system, such as better environmental management, information systems and the improvement of environmental awareness.

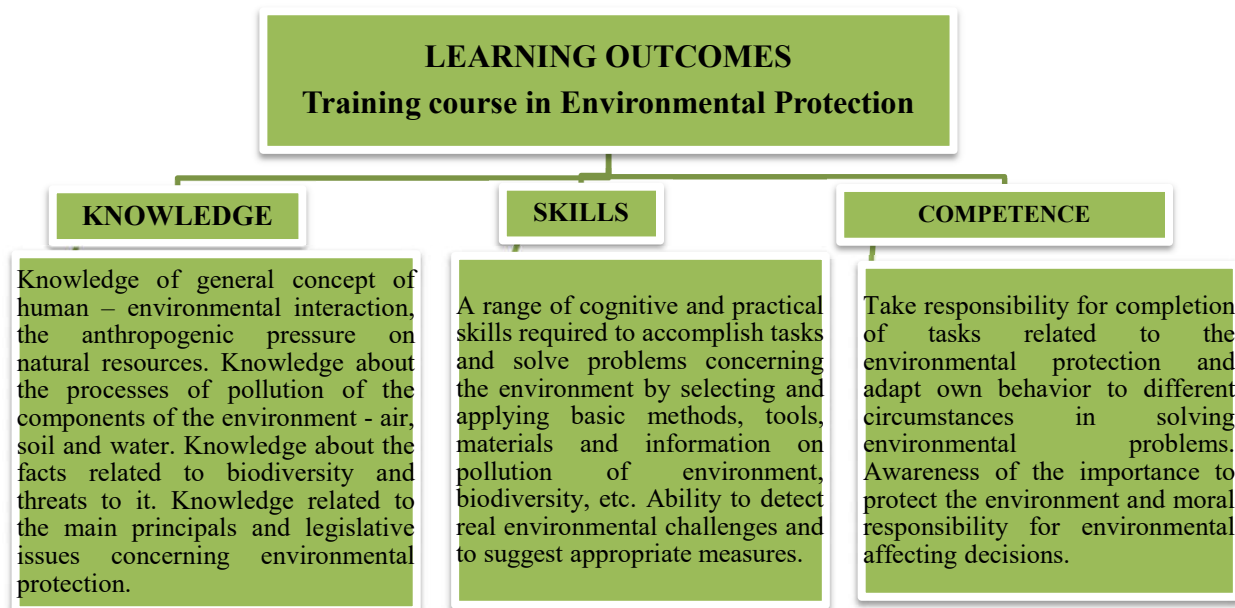
**Training contents:** The training consists of 6 courses as follows:

Course №	Topic/ Subject	Duration (in hours)	
		Lessons	Self-Learning Activities
Course 1.	Human and Environment	5	5
Course 2.	Biodiversity Protection	5	5
Course 3.	Soil Protection	10	10
Course 4.	Water Protection	10	10
Course 5.	Air Protection	5	5
Course 6.	Environmental Policy	5	5

The training units are developed in accordance with the European Qualification Framework (EQF) and the respective National Qualification Frameworks (NQF). Learning outcomes described in terms of knowledge, skills and competence are based on the definitions used in the EQF. Learning outcomes reflect overall competence in terms of what a learner knows, understands and is able to do on completion of the learning process<sup>1</sup>. The training course in Environmental Management is developed at Level 3 of the EQF and the Learning outcomes are described as follows:

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<sup>1</sup> Handbook to acquire key competences for the professional qualification EcoJob-AP“ on European Standards



### **Conclusion**

The VIVET platform is an excellent tool for students in VET to improve their knowledge and skills in the field of Environmental protection helping them improve their access to training material and thereby directly supporting their careers. Its functionality and online collaboration tools facilitate communication among students, teachers, colleagues and peers. The course is specifically designed for refugees and for them the platform and the training course provide opportunities to access vocational training resources and to develop skills necessary for gaining job in the field of environmental protection. By developing new skills, it enables the trainees to be active in their own integration. Vocational training is an active way to demonstrate that they will be able to integrate into their new environment.

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### **Internet resource:**

<https://vivet.education/>

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