

IV4J Erasmus+ project 2016-1-DE02-KA202-003271



Good Practice examples

Innovation in VET for Jobs and Employment

Collected by SBH Südost- Germany



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About the project

IV4J is a project funded with support from the European Commission under Erasmus+ Programme - Key action 2 – Strategic Partnerships for vocational education and training - Development of Innovation.

BACKGROUND

There is an urgent need to introduce new models of innovation in VET and in all educational system, especially if they are connected with the achievement of the EU 2020 goals defined and declared in the Europe 2020 flagship initiative An Agenda for New Skills and Jobs (ensure that people acquire the skills needed for further learning and the labour market through advanced and innovative VET) but also in ET2020 strategy, Opening Up Education policy and Erasmus+ horizontal and VET-specific priorities.

REASON FOR THE PROPOSAL

The proposal is in line with the above mentioned policies/strategies.

The elements the proposal is based on are:

- Introduce strong innovation in the VET system thanks to alternative and successful methodologies and approaches to the learning environment, in order to create a novel system aimed at job-oriented learning: the partners are aware of the lack of an effective system to transfer knowledge and provide learners of skills necessary for self-employment or employment
- The selected methodologies/approaches are: Entrepreneurship education, Work-Based Learning, Creative Problem Solving Methodology, Web 2.0 tools for VET, Gamification, Simulation and Digital storytelling, Open Educational Resources, ECVET implementation.

The PROJECT PROPOSAL is about innovation in VET and would like to explore innovation in VET in Europe and create several guidelines (interactive, practical and easy-to-use tips) about the ways to introduce a revolution in a job-oriented VET system.

OUTPUTS/RESULTS

The project aims to:

- Research, explore and discover from across EU successful GOOD PRACTICE examples about innovation in VET
- Promote the development, testing and implementation of INNOVATIVE PRACTICES/METHODOLOGIES in VET: Entrepreneurship Education, Work-Based Learning, Creative Problem Solving Methodology, Web 2.0 tools for VET, Gamification, Simulation and Digital storytelling, Open Educational Resources, ECVET implementation.
- Transfer the knowledge about the METHODOLOGIES through a large series of interactive GUIDES describing the methodologies, explaining in detail how to implement them in VET, introducing tips and providing a suggested quality management system
- Create a WEBSITE integrated with Wiki, Blog and Social Networks containing a DATABASE OF MATERIALS TRANSLATED into all partners' National languages to promote and encourage extensive exploitation and dissemination
- Stimulate ENTREPRENEURSHIP and WORK and JOB-ORIENTED LEARNING

- Disseminate the project outputs and results throughout EU with a database of OPEN EDUCATIONAL RESOURCES available through open licences thanks to intensive traditional and social media campaigns
- Arrange a series of MULTIPLIER EVENTS involving a large number of stakeholders to foster exploitation and dissemination of PROJECT Intellectual Outputs.

IMPACT ENVISAGED

The partnership will bring together partners coming from several countries and their stakeholders, both academic and private, with the synergic power to reach a very large and diverse audience.

The double-route to follow in the project is:

- Transfer innovative methodologies and approaches for VET to any interested parties (schools, higher education system, VET providers, adult learners, Erasmus + projects etc.)
- Recognise and validate the knowledge within partner staff thanks to ECVET system and a Memorandum of Understanding to validate a “Innovator in VET” profile.
- Create a network of European stakeholders interested in the introduction of innovation in Educational system.

PARTNERS

- FA-Magdeburg GmbH - Germany
- EURO-NET - Italy
- GODESK S.R.L. - Italy
- SBH Südost GmbH - Germany
- Get Tallaght Working Co-operative Limited - Ireland
- Universiteit Utrecht - Netherlands
- Espoon Seudun Koulutuskuntayhtymä OMNIA - Finland

Document background

The document contains the result of the Good practice (GP) research under the project lifetime.

The research about good practice examples is based on the Preliminary research about available tools, websites and activities that support IV4J present and available in each partner own country.

It is composed by the Best example (selected by project partners) from each country out of 7 topics below.

TOPICS:

1. Entrepreneurship education
2. Work-based learning
3. Creativity and CPS Methodology
4. Web 2.0 tools for VET
5. Gamification of learning, simulations and digital storytelling
6. Open Educational Resources (OER)
7. ECVET

CRITERIA used to select GPs:

- Transferability
 - Transformative
 - Sustainability
 - Availability
 - Usability
-

GP 1 - Gründerkids

How it works

Gründerkids supports schools and students in founding and running own businesses: so called school-companies.

How do they do that?

Gründerkids has a small project team, which goes out into the schools and offers different support to the kids and their companies. First of all they provide qualification. They offer 9 units which are separated in

Unit 1: basic knowledge about school companies

Unit 2: creativity and business model

Unit 3: finances and legal aspects

Unit 4: business organization and team aspects

Unit 5: management

Unit 6: presentation and communication

Unit 7: Networking

Unit 8: Management of knowledge and

Unit 9: personal Skills and certification

Participants of the units are the students themselves, but also teachers and pedagogical staff. After the qualification, the members of the project *Gründerkids* support the founding of school companies by consulting.

Which effects are expected?

Small companies which are run by students have different positive effects to the personalities: They improve various skills like corporate thinking and -acting, the ability to solve problems; they improve communicational skills and support the autonomy of young individuals. The Project also helps to create the feeling of success and improves the orientation for further profession choices.

One good Example of such a school company is the “Fair World Company”, which belongs to the Ökumenisches Domgymnasium (secondary school) in Magdeburg.

“Fair Word Company” was founded in 2010 and is actually run by 14 students in the age between 14 and 18. They organize a café where they sell fair traded goods and local products mostly in their school breaks but also at various events. Furthermore they sell fair traded cloth for students and teachers.

“Fair World Company” is a good example for successful activities of “Gründerkids”. Since 2009 the project supported 100 school-companies only in Saxony-Anhalt.



Geographical Area:

Germany, Sachsen-Anhalt

Criteria:

Sustainability, Usability

What:

Project, co-financed by ESF and the federal state Saxony-Anhalt

Implementation:

German federal Level

Reasons for Success:

Appropriate mix of knowledge and practical support

Links:

www.gruenderkids.de/

<http://www.domgymnasium-magdeburg.de/de/schulben/schuelerfirma/>

<https://www.youtube.com/watch?v=w86M2gaHv8g&feature=youtu>

Photos, pictures, logos

The “employees” of Fair World Company are selling their products



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<http://www.domgymnasium-magdeburg.de/de/schulleben/schuelerfirma/>

©Ökumenisches Domgymnasium Magdeburg

Logo of Gründerkids



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GP 2 - Industry 4.0 projects for VET

How it works

One of the mega trends (not only) actually in Germany is “digitalization”, “industry 4.0” and meanwhile “work 4.0”. Irrespective the field of work 4.0 the German VET system is distinguished by the “dual system” which means one the one hand knowledge is learned in a vocational school and one the other hand, the prentice gather practical experiences in a real company. And because this kind of VET is one kind of work based learning, we look in detail for innovative methods in the German VET.

Vocational Training 4.0 for mechatronics in the machine factory “Bernard Krone GmbH & Co. KG” in Spelle, Germany:

This company produces agricultural machines, has 2.000 employees and 38 youth, who are in a VET for mechatronics.

One way, how “industry 4.0” is involved in the VET of Krone is by giving a complete industry 4.0 project to the prentice. Here they can gather practical experiences and train their skills in cross-linked processes.

One concrete project is the model of a load carrier. This carrier was rebuilt by the young people by using the original fibers. With these fibers the harvest can we weight directly on the carrier. Now there is the opportunity to use this system as a training system and for the purpose of showing this function to customers.

Important is, that these projects are reflecting nearly the full value creation chain and often end with the delivery to customers. In this case, the project began of course with planning, buying requested parts, interviewing own technicians and researching the needed tools and software. Then the prentice construct these models by their own. They built this in their workshop and program the functions to this model. After testing the model, they have to make the documentation and the rollout to the customers. The Trainer only have a consulting function and just are giving support when needed.



Geographical Area:

Germany, Spelle

Criteria:

Innovative

What:

Vocational Training 4.0 for mechatronics in a machine factory

Implementation:

German, local Level

Reasons for Success:

Highly innovative

Links:

https://www.foraus.de/html/foraus_3562.php

<http://gruppe.krone.de/deutsch/>

<https://www.bmbf.de/en/index.html>

<http://www.forbes.com/sites/bernardmarr/2016/06/20/what-everyone-must-know-about-industry-4-0/#21f7ad294e3b>

Photos, pictures, logos

With their projects the prentice are going through all steps of a production process



Copy 28.02.2017, <https://www.foraus.de/> © by foraus.de

A prentice of Krone evolves a new prototype which is used in an agricultural machine.



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GP 3 – R.O.I.L.

How it works:

Roil supports the work based learning in VET for learning disabled prentice with a open computer based learning system.

What is the reason to use a CBS for learning disabled prentice?

Learning disabled prentice often have more problems in the planning, in the doing and the controlling of various tasks. They also have problems in the perception (auditive, optical, tactile and kinesthetic) so they need a special framework for supported learning and working.

How does ROIL support the Work based learning?

The computer based learning system is giving the prentice the design, the guidance and the possibility of controlling his work.

What is innovative?

Roil was not developed for theoretical use or pure knowledge transfer. It is more a tool which is used *while* working on a practical task. The prentice use the CBL while they are doing a working step, like woodworking.

Further positive aspects?

Due to the differences of the disabilities, the speed and intensity of learning of every prentice is different. The programming of this system allows an individual support, relating to the particular challenges.

The Trainers are relieved and have a good tool for learning controlling

When was Roil evolved?

The System was programmed in 1999 and had short time in the practical use. Although the trainer had a good tool for their VET, it wasn't further developed until today. One reason was the technical aspect, because at this time CBL Systems were more difficult to program. Today, there are more modern, intuitive and open source tools (moodle, ilias) to re-program CBLs like ROIL.



Geographical Area:

Germany, Magdeburg

Criteria:

Usability, transformative, sustainability

What:

Computer based learning system for practical use for students with a learning disability

Implementation:

German local level

Reasons for Success:

Specialised content

Links:

Photos, pictures, logos

Guiding a Task in the woodwork with ROIL © SBH Südost

Frage zum Einspannen eines Brettes

Wie **spannst** du das Brett in die Hobelbank **ein**, wenn du die **i** rechte Brettseite hobeln willst?

Klicke bitte **zwei** richtige Antworten an!

- Das Brett muss in die **Vorderzange** eingespannt werden.
- Die Bankhaken müssen über die Brettoberkante hinausragen, damit ich sehen kann, wie weit ich durchstoßen muss.
- Das Brett soll **bündig** mit der Hobelbank **abschließen**.
- Die Bankhaken müssen **tiefer** liegen als die **Brettoberkante**.

Verweis ins Infosystem

Auswertung der ausgewählten Antworten

Source: Own Material from SBH Südost GmbH

GP 4 – SHARKWORLD

How it works

SharkWorld offers the opportunity to gain experience with various aspects in the field of project management. The game creates a convincing virtual environment in which a project is performed in real-time (accelerated). The player is forced to react immediately to problems and take appropriate measures.

The game is playable online, but makes use of the various means of communication to communicate with the player.

What is the story?

The story takes place in modern Shanghai, where a gigantic high-tech shark aquarium with the name "Sharkworld" is built. An international company was commissioned to carry out this project. The company has a lot of experience with projects of this size, but no experiences with sharks.

Unfortunately the commissioned project manager fell ill through mysterious circumstances, so the player is sent to Shanghai to take his place and help the ongoing project to a successful end. Immediately after arriving in Shanghai, the player gets access to the data, emails and the appointment calendar of his predecessor

In order to successfully complete the project, he has to work with the Chinese client, his boss, the Chinese authorities and the local workforce. In addition, the player is confronted with a mad shark professor who has his own plans.

Why serious gaming?

This immersion is the important difference between Serious Games and e-learning, but also for simulations. The player becomes part of the game. The game moves the player into another world, so he perceives everything in a "inside-out perspective" and solves the problems from this perspective. The learning effect becomes much stronger when the player is emotionally involved.

By losing the critical distance, the player will behave more naturally. This opens great opportunities for self-assessment and reflection, as well as external assessments.

The Game can be bought for an amount of 175€.



Geographical Area:

worldwide

Criteria:

Availability, Usability

What:

Online project management game

Implementation:

Worldwide

Reasons for Success:

Learning through gaming

Links:

www.sharkworld.de

<https://www.youtube.com/watch?v=qvDe3SMADzg>

Photos, pictures, logos

A view into the game



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A view into the game



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GP 5 - „ZUM-Willkommen“

How it works

Zum Willkommen is a community for open source material for German lessons for refugees.

Why is OER needed for refugees?

Education is the key for the integration of refugees in the society. After the immigration of more than one million refugees, the local authorities in Germany were mostly overstrained in coping the situation and of course in organizing a well prepared education for this people. Many volunteer began to offer German lessons so that the refugees could learn the German language and cultural conventions.

Later the German federal ministry of education and research released a 130 Million Euro for education and integration, which basically was requested by the educational institutions.

So the demand came up, that the material which is sponsored by the public authorities has to be open source material.¹

On the other hand the advantages of OER in general have a bigger importance for the education with refugees, because this education is divided into many often smaller actors like smaller companies, associations, institutions, and so on. These actors gain access to valuable material and get the opportunity to improve their offer, which is in the focus of public interest.

What is the portfolio of “zum-willkommen”?

On the website of that project you can find a big collection of different material which can be useful in the educational work with refugees:

- Worksheets
- Dictionaries
- Videos
- Auditive material
- Material for different target groups (kids, analphabet...)
- Games
- Wikis
- Links
- Apps
- Tests

¹ <http://www.oer-fuer-fluechtlinge.de/>



Geographical Area:

Worldwide

Criteria:

Availability, sustainability, transferability

What:

Community for open source material for German lessons for refugees

Implementation:

German level

Reasons for Success:

Immediate material for various stakeholders

Links:

<http://willkommen.zum.de>

- And many more

Furthermore the collection of zum-Willkommen.de contains material in different languages like German, English, Arabic, Farsi or French. The resources have a remarkable quality and are geared to the official standards.

Photos, pictures, logos

The portfolio of ZUM Willkommen is available on a Wiki platform. The Material is separated in different themes like:

Daily routine, Work, shopping, health, education, media, orientation, rooming, authorities or cultural identity.

Kommunikation in Handlungsfeldern		
Situations, in denen sich Menschen in der Gesellschaft bewegen und in der Zielsprache kommunizieren oder agieren; z.B. in der Arbeitssituation, mit Behörden, in Kindergärten und Schulen etc.		
 Alltag in Deutschland	 Arbeit	 Einkäufen
 Gesundheit / Medizinische Versorgung	 Unterricht Kindergarten / Schule / Ausbildung	 Mediennutzung
 Orientierung vor Ort / Mobilität	 Wohnen	 Ämter und Behörden
Sitten und Gebräuche in Deutschland Lokale Besonderheiten	Interkulturelles Lernen Hinterfragen, Perspektivwechsel, Empathie	

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GP 6 - ECVET in the Automotive-Sector

In Germany, the piloting of a credit point system for vocational education and training is taking place within the scope of the DECVET Pilot Initiative, which is being funded by the Federal Ministry of Education and Research (BMBF), and within the context of transnational mobility and innovation transfer measures as part of the PLL Leonardo da Vinci Programme. In order to support educational stakeholders in Germany in the piloting of ECVET principles, the National Agency Education for Europe at the Federal Institute for Vocational Education and Training (NA at BIBB) has acted on behalf of the BMBF in establishing an ECVET National Coordinating Agency. This Agency provides information on current developments, provides advice and support to stakeholders in the development of materials which are relevant to practice and fosters the exchange of experiences.

The Federal Republic of Germany was actively involved in the negotiations for the Commission's draft and the Recommendation of the European Parliament and succeeded in implementing a number of negotiating aims. These include the retention of the principle of **voluntary participation** in the acceptance and implementation of ECVET and the **bottom-up principle** – i.e. no rigid stipulations are made by the European Commission and national educational legislation is respected. This made it clear that the application of ECVET and in particular the accumulation of learning units only take place in accordance with the respective national and regional regulations and provisions and that no new citizens' rights are created in respect of automatic recognition of learning outcomes or credit points.²

Practical examples in Germany are rare. Reglin Schoepf examined the helpfulness of ECVET in the automotive sector and come to the following conclusion³:

The study postulates basically positive attitudes towards the ECVET and the

² Bundesinstitut für Berufsbildung, DEQA-VET - Deutsche Referenzstelle für (V) Berufsbildung / Federal Institute for Vocational Education and Training The German Assurance in Vocational Education and Training

³http://www.f-bb.de/uploads/tx_ffbb/Reglin_Schoepf_ECVET_im_Automotiv_Sektor_2007.pdf



Geographical Area:

Germany

Criteria:

Controlling, evaluation

What:

Study

Implementation:

German national level

Reasons for Success:

-

Links:

http://www.f-bb.de/uploads/tx_ffbb/Reglin_Schoepf_ECVET_im_Automotiv_Sektor_2007.pdf

related aspects such as the certification of parts of qualifications, the transmission of learning outcomes from one country to another, and the transfer of learning results from one part of the education system to another.

The main problem of the current discussion about the ECVET development trends is named, that there are no concrete examples of the translation of professions into the language and logic of ECVET.

It was noted that the instrument ECVET could only be finalized when operationalization and practice were carried out. Experimental trials will focus on the implementation process of ECVET so they can help to develop prototypes of the structure of occupations an set ECVET on a solid basis.

A successful introduction of ECVET in Germany depends from the point of view of the companies, that some basic requirements on the performance point system are fulfilled: ECVET must be able to take the proximity and practice orientation, as enabled by the dual vocational training system into its account and to integrate them as a substantial component into its structural model. ECVET must be equally applicable to companies and vocational schools, because of the dual vocational system in Germany.

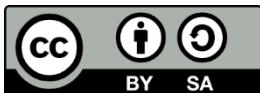
And last: ECVET must be flexible, easy to handle, directly at the level of in-company training. In addition, the system needs to be accepted both: at the internal business level and at the labor market level.

Credits



Co-funded by the
Erasmus+ Programme
of the European Union

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein



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FOR JOBS AND
EMPLOYMENT**

contact

www.IV4J.eu

Authors: Philipp Munk

Content setting: FA-Magdeburg, Euro-net

Layout design by: Euro-Net

Publisher: IV4J.eu, vetinnovator.eu

Free publication, April 2017