EDUCATIONAL HANDBOOK

"Tools for VET in WEB 2.0"



Project: "Innovative Methodologies and PRactices on VET"

Erasmus Plus KA2 Strategic Partnerships for VET -

Development of Innovation

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EDUCATIONAL HANDBOOK "Tools for VET in WEB 2.0"

Developed under the project "Innovative Methodologies and PRactices on VET"

October 2020

Free publication



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CHAPTER 1: Introduction

1.1 What is vocational education and training?

Vocational education and training (VET) is a key element of lifelong learning systems, which equip citizens with knowledge, skills, and competencies required in particular occupations and on the labor market.

VET responds to the needs of the economy, but also provides learners with skills important for personal development and active citizenship. VET can also boost enterprise performance, competitiveness, and research and innovation and is a central aspect of successful employment and social policy.

Vocational education and training (VET) systems comprise initial and continuing VET.

- 1. Initial vocational education and training (I-VET) are usually carried out at the upper secondary level before students begin working life. It takes place either in a school-based environment (mainly in the classroom) or in a work-based setting, such as training centers and companies. This varies from country to country, depending on national education and training systems, and economic structures.
- Continuing VET (C-VET) takes place after initial education and training, or after beginning working life. It aims to upgrade knowledge, help citizens gain new skills, retrain, and further their personal and professional development. C-VET is largely work-based with most learning taking place in a workplace [1].

1.2 Challenges for the future and new Pedagogical Skills

The VET system is in continuous evolution and involves education authorities and social partners. The future challenge for VET is adjusting it to the labor market needs and avoiding skill mismatches.

This requires flexible education and training opportunities that involves different types and levels of learning (formal, non-formal, and informal learning) throughout life [2].

^{[1].} ec.europa.eu. (2020). [online] Available at: https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en

^{[2].} European Centre of Educational Training, Cedefop.de (2020). [online] Available at: https://www.refernet.de/dokumente/pdf/Cedefop%20briefing%20note_9096_en.pdf



Embedding social computing tools in education is dramatically changing the role of teachers, transforming them into facilitators of processes of knowledge (co-)constructions in which learners are far more active than they have ever been. Under the Learning 2.0 paradigm, teachers can be conceived of as "scaffolding", i.e. as guides, coaches, moderators, who provide a supportive environment in which learners can learn – with another and from one another – in the way that best fits their individual learning needs, preferences and strategies [4].

1.3 Project IMPROVE

An international partnership project IMPROVE aims to satisfy the need for innovation in VET systems, thanks to alternative and successful methodologies/approaches to the learning environment, to create a successful experience in job-oriented learning.

1.4 Guide "Tools for VFT in WFB 2.0"

"Tools for VET in WEB 2.0" guide aims to illustrate that VET (Vocational Education and Training) can benefit from the contemporary Web 2.0 methods and tools.

We would like to focus on Continuing VET (C-VET) while the learning and teaching process will

evolve further in the direction of continuous and life-long learning [3].

This publication is based on a practical approach.

In this publication you will find:

- Tools for communication
- Tools for collaboration
- Tools for creation
- Tools for continuous learning

This publication is for:

- VET teachers, trainers, and mentors in both, school and work-based settings
- VET learners/students after initial education and training, or after beginning working life

^{[3].} ec.europa.eu. (2020). [online] Available at: https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en

^{[4].} Learning 2.0:The Impact of Web 2.0 Innovations on Education and Training in Europe Final Report (2009). [online] Available at: https://publications.irc.ec.europa.eu/repository/bitstream/JRC55629/jrc55629.pdf



CHAPTER 2: WEB 2.0

2.1 What is WEB 2.0?

Web 2.0 (also known as Participative (or Participatory) and Social Web) refers to websites that emphasize user-generated content, ease of use, participatory culture, and interoperability (i.e., compatible with other products, systems, and devices) for end-users.

A Web 2.0 website allows users to interact and collaborate through social media dialogue as creators of user-generated content in a virtual community. This contrasts the first generation of Web 1.0-era websites where people were limited to passively viewing content. Examples of Web 2.0 features include social networking sites or social media sites (e.g., Facebook), blogs, wikis, folksonomies ("tagging" keywords on websites and links), video sharing sites (e.g., YouTube), hosted services, Web applications ("apps"), collaborative consumption platforms, and mashup applications [4].

In the cases of Vocational Education and Training the WEB 2.0 offers three main potentials:

1. Let VET trainers continuously learn in collaboration with their colleagues worldwide. The WEB 2.0 is especially proficient for VET teachers to get awareness, knowledge and skills of new best practices for adopting and using new media for teaching/learning

2. Let VET learners access new professional tools/methods more quickly and more versatile just before and during their job performance. In the case of VET courses, it is not clear yet how

the optimal balance between "following" the given course and "exploring" diverse related knowledge resources world-wide.

3. Both for VET teachers and VET learners, the participation via WEB 2.0 has increased the options to act in collaboration, develop a problem-based learning attitude, and invest in creative thinking and problem-solving.



2.2 The purpose and usefulness of tools Web 2.0 in VET.

The didactic process should allow students to feel a shared responsibility for learning. Thanks to tools Web 2.0, adult learners are more involved in various activities, are activated to work and learning become more effective.

While initially e-learning was mainly based on unidirectional information transfer, currently thanks to tools Web 2.0, adult learners can perform a much more active role in the learning process using modern technology. The use of remote learning platforms (e.g. forums, wikis) and the possibility to create own content and open, own services on Social Media make them complementary.



CHAPTER 3: Tools for communication

Websites, blogs, email groups e.g. Skype, communicators, Podcast, Social Media

3.1 Social Media and Social media sites

For teachers/trainers

Like any sector, also VET has a growing awareness that social capital needs to be maintained through face-to-face and social media.

We can consider the important role of social media in professional development. Especially in the case of new media, learning and sharing among VET teachers is a vital process. Social media are important in terms of networking and communication with the larger audience.

For adult learners

The biggest advantage of social media is better communication and collaboration. A student can connect with anyone at any point in time via Messenger or WhatsApp. They can use such platforms via their smartphone, tablet, or computer, and learners can exchange questions, make phone calls or video calls.

Therefore, it can be claimed that social media platforms, enabling free voice and video calls, the sharing of documents, links, and any other type of information can be highly effective in improving academic performance and students' learning.

Another advantage of social media in VET education is distance learning opportunities. Many disadvantaged learners are not able to acquire formal education by attending regular classes in an educational institution. With the help of various online tools along with social media, modern educators can attract adult learners through distance learning programs.



3.2 Blogs

We setup up a focus on the trainer/teacher in VET-process and sharing knowledge, experience using online tools.

Very popular are blogs, if teachers are using blogs classroom-based they can share information, task, projects.

The general aim can be discussed to a teacher-generated topic or question. Blogs can inform people about the lesson content, to generate interest in future lessons.

Another option is to find out, what the students already know.

Using Blogs can supply students with feedback from classmates and/or teachers. For learners: peer to peer learning.

3.3 Tumblr

What it is	microblogging and social networking website
www	tumblr.com
access	browser, App online and offline, account registration
comments	Free, extra instant messaging, group chat function,

Tumblr is a microblogging and social networking website.

The service allows users to post multimedia and other content to a short-form blog. Users can follow other users' blogs. Bloggers can also make their blogs private. Tumblr is 489 million different blogs [5].

Tumblr is intuitive and easy to use. It is not necessary to have any ICT skills to share your content like stories, photos, links, chats, audios, videos, and more.



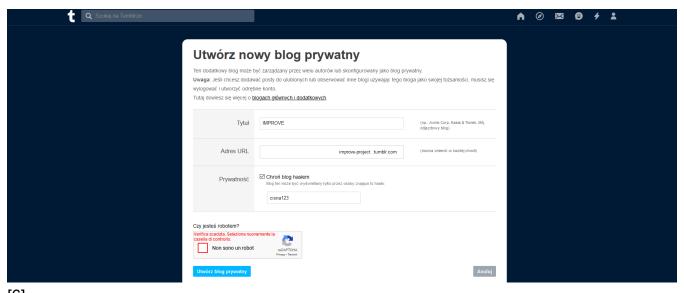
[6]

How to use it?

Register your account.

^{[5].} wikipedia.org (2020). [online] Available at: https://en.wikipedia.org/wiki/Tumblr#Promotion of self-harm and suicide

^{[6].} Photos/screenshots, by Euro-Idea Fundacja Społeczno-Kulturalna (2020). [online], private source

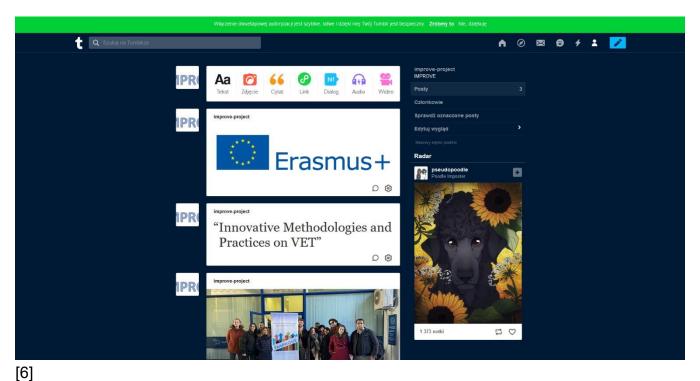


[6]

From your dashboard, it is possible to make research, chat, receive communication, and modify your account settings.

Just add your text or content and insert tags.

It is for free and ready in 5 minutes www.tumblr.com/blog/improve-project



^{[6].} Photos/screenshots, by Euro-Idea Fundacja Społeczno-Kulturalna (2020). [online], private source

CHAPTER 4: Tools for collaboration

Kanban Board organisers, Cloud Storage, organising schedules, and time management.

4.1 Trello

What is	task organizer
www	trello.com
access	browser, App, account registration
comments	Free, you can pay for the extended version, tag people, activity log option

Trello is a free, online, task organizer. Trello looks like a whiteboard with sticky notes, it is web-based and allows real-time team collaboration anytime and anywhere. The overall aim of such tools is to maximise the communication and collaboration of project participants in real-time, in structured manner.

Trello keeps project participants informed of key tasks and task assignments with email notifications. Trello allows the monitoring of activities through an activity log. Project members can be added or deleted as required.

With Trello, you'll be able to organize your cards through tags, attach files, and define deadlines.

You assign team members to cards (tasks) and then track your team's progress, as they move their cards across appropriately named columns: for example

- To-do for the tasks your team has on the agenda for the future
- In progress for the tasks your team is currently working on
- Done for the tasks your team has finished

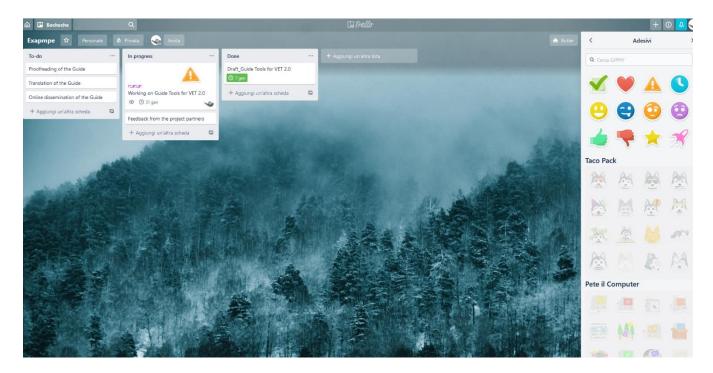
You may adopt Trello to any kind of project.



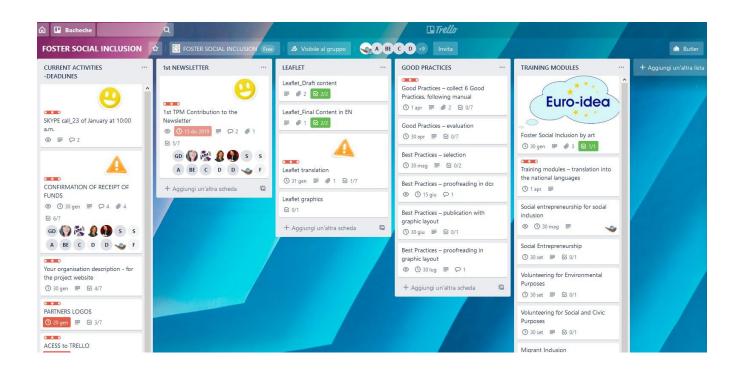
Trello for VET

Trello offers many important project-related benefits for teachers and students in VET.

- Trello is easy to use and fully customisable.
- Trello provides effective project management of teaching and learning requirements, with the ability to assign and create tasks, start discussions, add attachments, and email/ text alerts and notifications.
- Trello is free for its basic service and has an app on iPhone and Android for mobile users
- Trello is real-time,
- Trello keeps data secure and private through a secure SSL/ HTTPS connection and encryption technology system. [6]









4.2 Google drive

What is	Cloud storage
www	google.com/drive/
access	browser, App, Google account registration
comments	Free, you pay for extended version, activity log option

Google Drive: It is cloud storage for personal and business use developed by Google. Cloud Storage is a service where data are remotely maintained, managed, and backed up. The service allows the users to store files online, so they can access them from any location via the Internet.

Cloud storage enables applications to upload data to a network of remote, connected servers. Applications can then maintain that data and access it from anywhere.

Google Drive offers personal users 15 gigabytes of free storage and optional paid plans. The user can safely store files and open and edit them on any device using Google Drive to keep and share their photos, stories, projects, drawings, recordings, videos, and more.

Google offers tutorials in various languages and user assistance. You need a Google Suite account.

Why useful for VET

You can quickly invite other people to view, download, and collaborate on all the files you want, without having to send email attachments.

Google Drive offers online access to the most used formats like docx, excel, and powerpoint to manage from your devices and share with your team and collaborators.

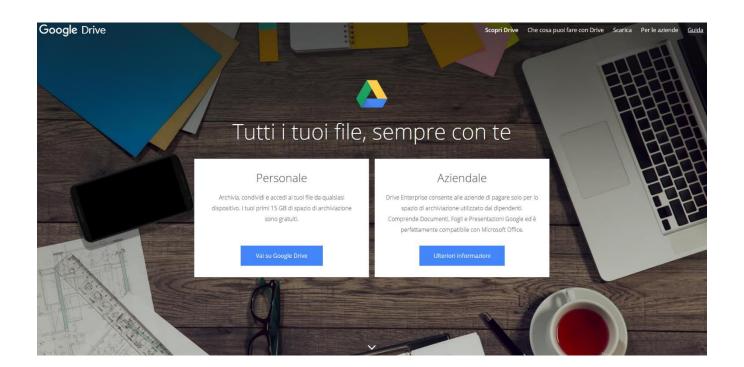
Another useful feature is that you can upload and share files with your team. As files are written they are automatically updated and synced so that your team or customers can view the files in real-time.

It is a useful tool for sharing your work and co-creation (for example working on one file in contemporary with more users) [7].





Archivia qualsiasi file
Conserva foto, store, progetti, disegni,
registrazioni, video e molto altro. I tuoi primi 15
GB di spazio di archiviazione sono gratulti con
un Account Google.



4.3 Google calendar

What is	time-management and scheduling calendar
www	google.com
access	browser, App, Google account registration
comments	Free

Google Calendar is a time-management and scheduling calendar service developed by Google.

You need a Google Suite account.

With Google Calendar is possible to:

- 1. Schedule events
- 2. Respond to and manage events
- 3. Create reminders in Calendar
- 4. Share and view calendars
- 5. Customize your calendar
- 6. Access your notes and tasks

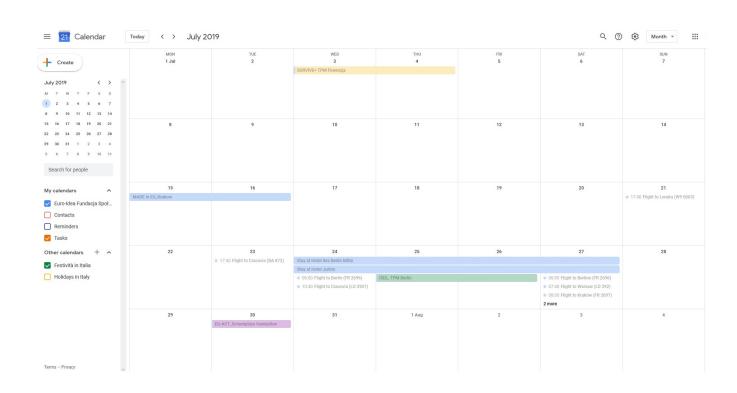
Schedule one-time activities, such as conferences, as well as recurring events, such as staff meetings.

Add an event title, date, and time. Invite people to the event. You can add a Google Groups mailing list address to invite a large group of people at once. It is possible to share the event with more people. You may add permission to other people to edit the event. It is possible to add an event description and attachments.

Finally, you may customize your event by choosing an event colour, calendar, and default visibility [8].

Google offers tutorials in various languages and user assistance.





^{[6].}Photos/screenshots,by Euro-Idea Fundacja Społeczno-Kulturalna (2020). [online] , private source

^{[8].} google.com (2020). [online] Available at: https://support.google.com/a/users/answer/9302892?hl=en&ref_topic=9282962

4.4 Doodle

What is	time-management and scheduling calendar
www	doodle.com
access	browser, Google, Facebook, Microsoft account, App, no registration
comments	Free, you pay for an extended version

Doodle is an online scheduling tool. Doodle can be a valuable tool for coordinating an enormous event like volunteer training and a small event like a monthly meeting with the board.

It is available in 26 different languages, written in JavaScript and the slogan used by the company to describe the tool is: "Easy scheduling"

After a suggestion for dates and times for an event, the participants can choose. Then Doodle creates a polling calendar that can be sent to participants for feedback. Each participant selects the dates and times from the polling calendar, Doodle aggregates the responses and tells you which option works best for everyone.

It is essential to organise and manage the work in groups per the participants' availability and planning needs.

It could be used to plan meetings, events, and simple surveys.

How to use Doodle

- Suggest options: select dates, places, or preferences for the Doodle poll;
- Invite participants to vote: With the invitation, participants can select their preferences without

an account needed;

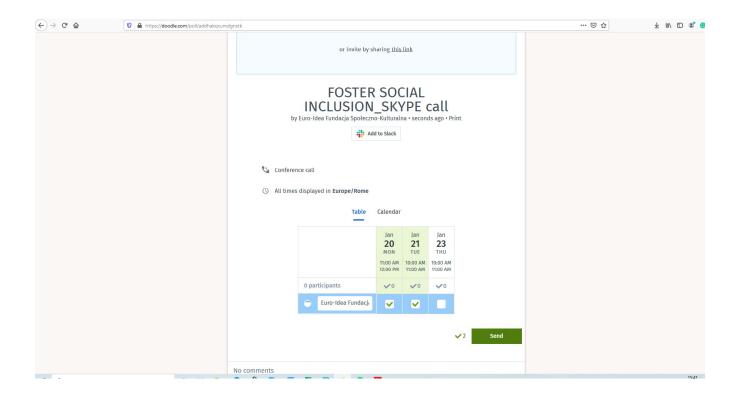
 Select the best option: Once the votes are in, it is possible to pick the final option in few seconds.

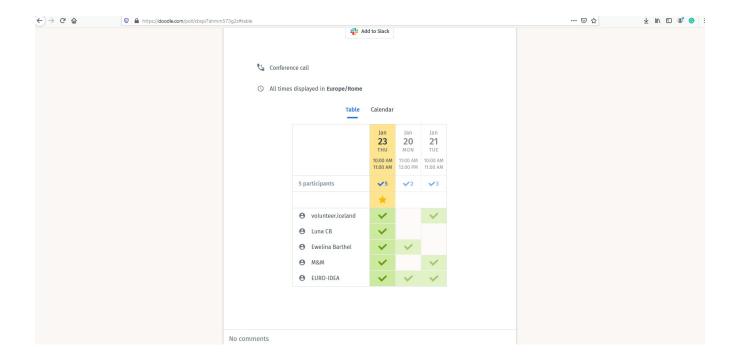
Other features

- Calendar Integration: it is possible to connect a calendar, to create and participate in polls directly from Doodle's calendar view. Doodle also automatically syncs the events.
- Personalized dashboard: Management of the Doodle polls from one organized place with an immediate view of all the polls from a dashboard (the ones you've created and also the ones you've participated in).
- The free Doodle app works seamlessly with all major devices. (AppStore, Google Play): Track the Doodle polls and receive activity notifications.
- Simple surveys[9].

^{[9].} doodle.com (2020). [online] Available at: https://doodle.com/en/







[6]. Photos/screenshots, by Euro-Idea Fundacja Społeczno-Kulturalna (2020). [online], private source



CHAPTER 5: Tools for creation

Canva, Adobe SPARK, Prezi

5.1 Canva

What is	graphic-design tool
www	canva.com
access	browser, Google, account registration
comments	Free, you pay for extended version share your projects, can be used for both web and print media design and graphics

Canva is a simplified graphic-design tool, founded in 2012. It uses a drag-and-drop format and provides access to photographs, vector images, graphics, and fonts. It is used by non-designers as well as professionals. The tools can be used for both web and print media design and graphics.

Canva allows multimedia materials creation. With Canva it is possible to create professional powerpoint presentations, posters, brochures, social media banners, newsletters, and publications.

The basic version is for free and allows you to create mesh-up graphic content, reuse and add the graphic content you need.

Canva offers thousands of design types, templates, photos, and Icons. With Canva you can make graphs, photo editing, and print.

With Canva it is possible to create products for mobile, education, nonprofits, and much more. The best way to understand Canva is to try it! [10].





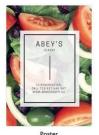




Design presentations, social media graphics, and more with thousands of beautiful layouts.





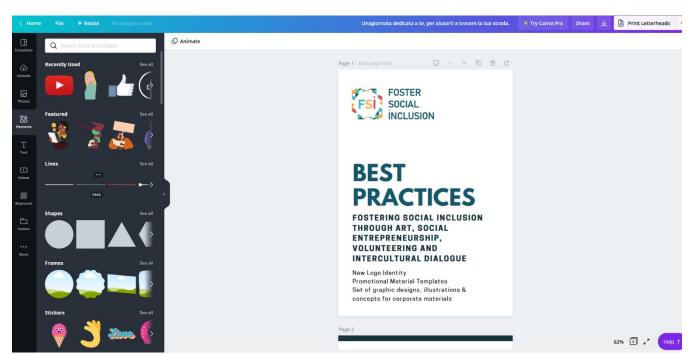












[6].

^{[6].} Photos/screenshots, by Euro-Idea Fundacja Społeczno-Kulturalna (2020). [online], private source

5.2 Adobe SPARK

What is	media creation applications for the mobile and web
www	spark.adobe.com
access	browser, Google, Facebook, Apple account, adobe ID, account registration
comments	Starter for Free, you pay for an extended version

Adobe Spark is an integrated suite of media creation applications for the mobile and web developed by Adobe Systems. It comprises three separate design apps: Spark Page, Spark Post, and Spark Video.

The content automatically saves on the cloud. This free Adobe Spark web app syncs with Spark Page, Spark Post, and Spark Video iOS mobile apps, allowing users to create, edit, and share their visual stories from any device.

The three design apps allow users to create and design visual content that can be used for businesses, education, social media marketers, etc.

The Spark Gallery highlights different projects made by people using the application. Users may import/search pictures using any of the three applications, with only images tagged with the Creative Commons license being available with the search tool [11].

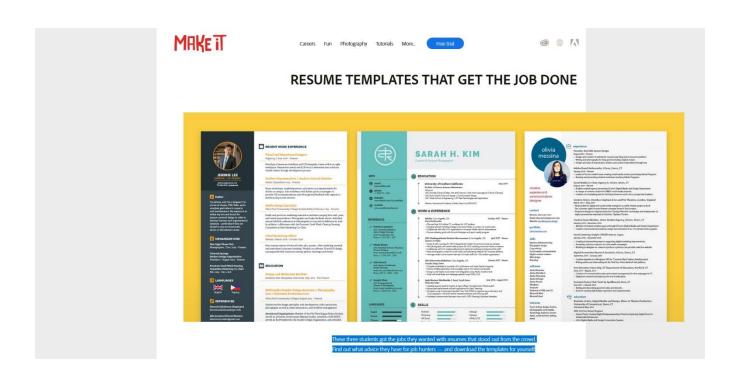
Students and teachers

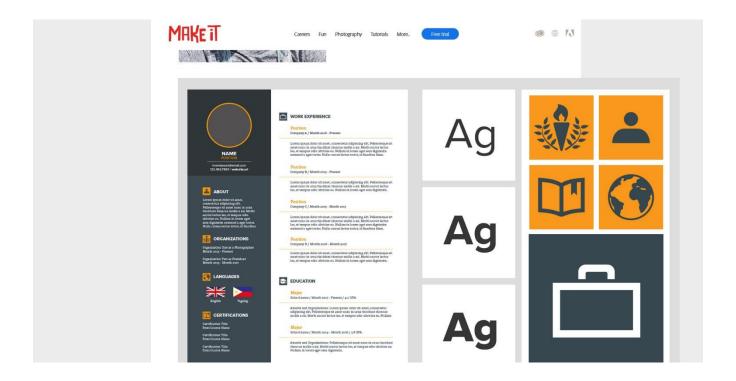
Other features:

To make your presentations powerful

To design your project website or app

To make your CVs professional, using successful templates







5.3 Prezi

What is	presentation software
www	prezi.com
access	browser, Google, account registration
comments	Starter for Free, you pay for an extended version

Prezi is a presentation software.

Prezi allows you to create zooming, moving and visually surprising presentations that capture and hold the attention of your students, whatever subject you teach. The presentation makes a big impact on your audience. Prezi is more effective than slides.

Prezi platform is a network and presentation resource, on a mission to reinvent how people share knowledge, tell stories, and inspire their audiences to act. The zooming slides and the ability to show the relationship between presented topics and makes Prezi a very powerful tool for classroom lectures and communication.

It was also used during TED Talk to the world's foremost thinkers.

It is possible to try Prezi for free.

For your presentation, you may use already existing templates or presentations.

Prezi offers beautiful models for any teaching activity and Free Models.

Prezi EDU models for schools and non-profit associations are easily customized to make your message more engaging, easier to understand.

Using visuals and movement instead of static text, Prezi catches and keeps your students' interest. Jump freely from topic to topic, focusing on the material you want to cover. Prezi's unique format lets you show the entire story in context, displaying relationships between ideas in ways slides just can't.

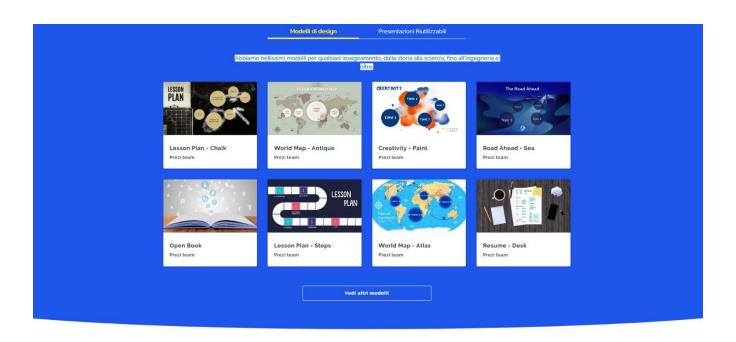
Smart branding, a huge image library, and tons of easily customized charts, graphics, and layouts let you quickly make your presentation your own.

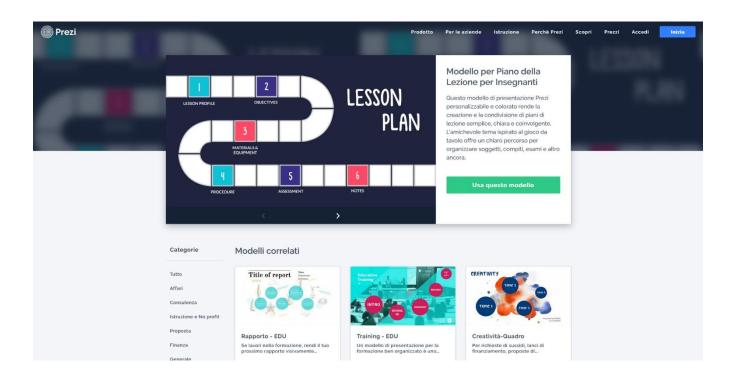
You may use professional presentations/lessons already existing.

For example, a well-organized presentation model for training is a fundamental tool for education professionals. From concept maps to reviews, Prezi's training model will help you bring your next EDU training presentation to the top of the class.

It is possible to create and share lesson plans in a simple, clear, and engaging way. The template will help you to organise your lesson and content like lesson profile, objectives, materials, and equipment, procedure, assessment, notes[12].







[12]. prezi.com (2020). [online] Available at: https://prezi.com/ https://prezi.com/presentation-template/training-edu/



CHAPTER 6: Tools for Continuous learning

Coursera, edX, Iversity

6.1 Coursera

What is	eLearning platform
www	coursera.org
access	browser, account registration
comments	

Coursera provides universal access to the world's best education, partnering with top universities and organizations to offer courses online.

Every course on Coursera is taught by top instructors from world-class universities and organizations, so you can learn some new information, anywhere. Several free courses allow you on-demand video lectures, homework exercises, and community discussion forums. Paid courses provide additional quizzes and projects as well as a shareable Course Certificate upon completion.

Coursera stimulate lifelong learning and can be used in VET by corporations as well as selfemployed and unemployed.

Coursera offers courses for professionals and for those who want to acquire new skills or implement their skills in different fields.

The platform is worldwide and offers courses in various languages.

The platform guarantees flexible access to the resources and makes education possible also for those who are already working and do not have so much time for new skills development. The platform offers users the possibility to adapt better to the labour market.

87% of people learning for professional development report career benefits like getting a promotion, a raise, or starting a new career[13].

[13]. Coursera Learner Outcomes Survey (2019)



Achieve your goals with Coursera



Learn the latest skills

like business analytics, graphic design, Python, and more



Get ready for a career

in high-demand fields like IT, Al and cloud engineering



Earn a certificate or degree

from a leading university in business, computer science, and more



Upskill your organization

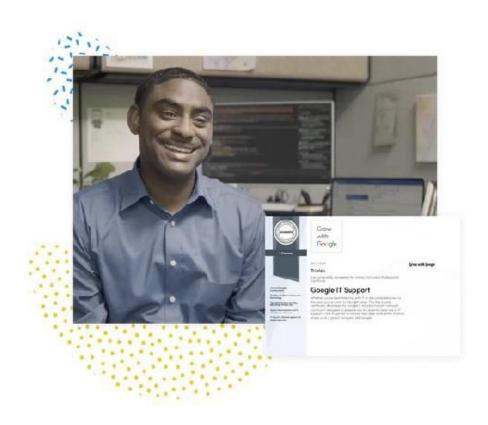
with on-demand training and development programs

Professional Certificates

Useful to start a new career or change your current one,

Professional Certificates on Coursera help become job-ready. Learners can learn from top companies and universities, apply your new skills to hands-on projects that showcase their expertise to potential employers, unlock access to career support resources, and earn a career credential to kickstart their new career.

Learners can show their new skills by sharing Course Certificates, Professional Certificates, or diploma with their network[14].



[14]. coursera.org (2020). [online] Available at: https://www.coursera.org/



6.2 edX

What it is	eLearning platform, MOOCs provider
www	edx.org
access	browser, account registration
comments	

edX is the trusted platform for education and learning. Founded by Harvard and MIT, edX is home to over 20 million learners, most top-ranked universities in the world, and industry-leading companies. As a global non-profit, edX is transforming traditional education, removing the barriers of cost, location, and access.

edX is the only leading Massive Open Online Courses (MOOCs) provider that is both a nonprofit and open source.

Open edX is the open-source platform that powers edX courses and is freely available. With Open edX, educators and technologists can build learning tools and contribute additional features to the platform, creating innovative solutions to benefit students everywhere.

Introducing edX For Business:

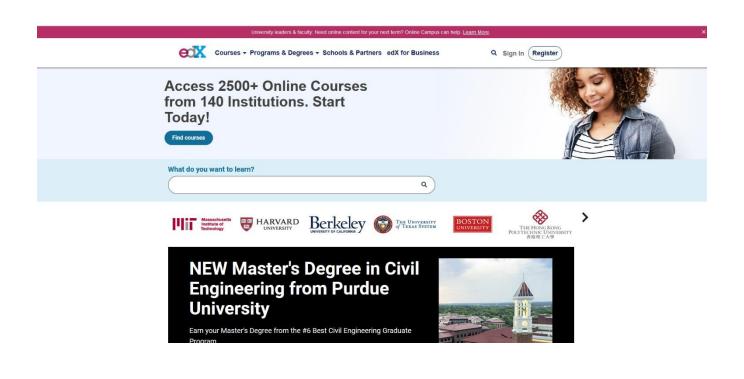
The edX For Business platform delivers on-demand eLearning solutions built to help companies grow and thrive.

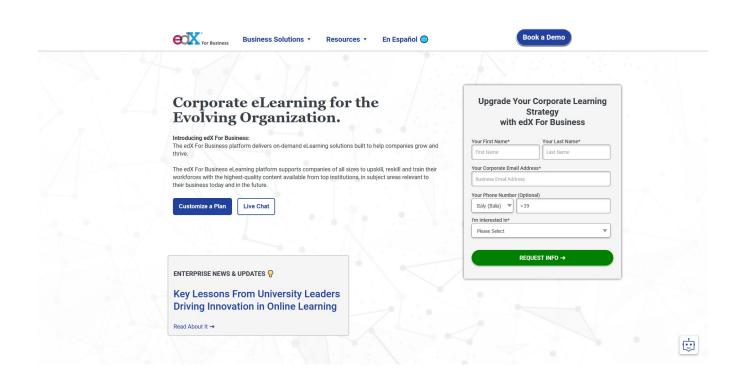
The edX For Business eLearning platform supports companies of all sizes to upskill, reskill and train their workforces with the highest-quality content available from top institutions, in subject areas relevant to their business today and in the future.

edX For Business offers:

- Corporate Training Solutions
- Courses for Corporate Learning
- Employee Soft-Skills Training for Business Communication, Teamwork & Collaboration, Critical Thinking Training, Storytelling in the Workplace.
- Re-Skill and Upskill Your Team [15].

^{[15].} edx.org (2020). [online] Available at: https://business.edx.org/blog/3-ways-to-use-e-learning-to-build-a-happier-more-productive-workplace-in-2020







6.3 Iversity

What it is	eLearning platform,
www	iversity.org
access	browser, account registration
comments	

Inversity is an European eLearning platform and offers high-quality content, challenging assignments, and inspiring peer-learning.

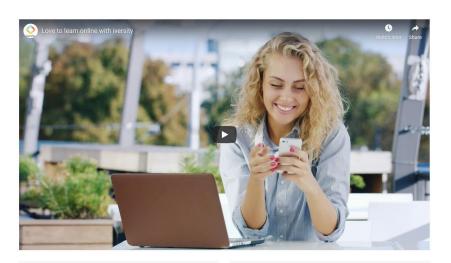
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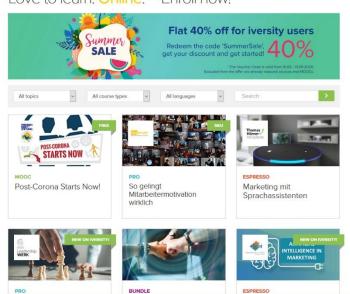


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CHAPTER 7: Research all over Europe

7.1 Web 2.0 Tools for VET in Finland

National policies and context

Available positions in the job market are changing, and so are the required skills from the employers. The change is partially for the use of ICT in everyday life and all aspects of society. It offers new opportunities in terms of learning and ways of learning. It is an opportunity to reinforce learning motivation and meaningful learning. Nowadays, all school students were born in the digital age, and the ways of learning and by consequence teaching need to adapt to the tools and content at their disposal. ICT offers the possibility to learn beyond books and encourages the learner to be more active in the learning process, as to look for the content, test its relevancy, and interpret it.

According to the Education, Training and Demand for Labour in Finland by 2025, the importance of ICT will continue to flourish and will be an important source of growth in productivity within services, trade, and the public sector. The proportion of electronic transactions is estimated to grow within the trade in particular.

Using ICT in teaching and learning requires introducing new pedagogical methods. Student-centered working methods combined with the change in the teacher's role form the basis for alternative ways of learning. In the Finnish education system, the national curriculum only gives a broad guideline to the content to be taught, and by consequence, gives schools and teachers the freedom to implement the content as they see fit. Teachers can decide freely how and how often they are using and incorporating the use of ICT in their teaching.

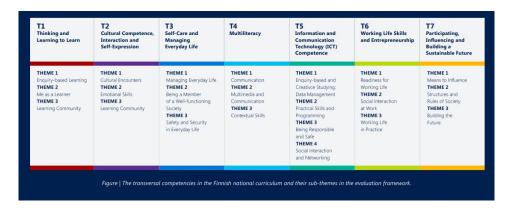
According to the National Plan for Educational Use of Information and Communications Technology, 2010, Finnish schools, in general, are lacking technical and pedagogical support for using ICT. E-learning material availability and quality are rather low and teacher-training should be updated. Finland is at around the European average and the last of the Nordic countries in terms of educational use of information and communications technology.

Research on the state of digitalisation of vocational education and training is relatively limited. In the follow-up by the Finnish National Board of Education of implementing the National Vocational Qualifications b and the curricula for preparatory and training courses, VET providers have been asked about their e-learning offering. In 2013, 76% of VET providers offered them possibly and 46% offered e-learning to few or all students. In 2012, 59% of the respondents provided e-learning. Nevertheless, Finland is working on overcoming the gap and in the curricula reform in 2014, The Finnish national core curriculum reinforces the importance of using educational technology. One particular aspect was to develop learning environments by introducing games and other virtual environments. The widespread use of ICT as a learning tool has been a key element in the development of VET learning environments and teacher training for many years. ICT has been a separate focus of education staff training and



elements of digitalisation have been an integral part of many developmental programs, such as advanced work-based learning pilot projects, youth work, and apprenticeship reform, etc. The National Board of Education ,the Ministry of Education and Culture have supported the development of virtual learning environments through government grants for the development of learning environments in vocational schools, since 2007. New learning opportunities have been created by various social media environments as well as 3D virtual worlds, mobile devices, learning games, and simulation. The development of learning environments in VET schools emphasizes working life cooperation, student orientation, multi-channel learning support and guidance, and the reform of educational institutions' operational culture. The far reaching utilization of ICT as a device for advancing learning and working life is a critical component in the improvement of VET learning conditions. According to the ICT in Education study, in Finland, digitalisation and the use of ICT have been taken into account at a strategic level, and results have been mainly above the EU average.

In 2011, the Ministry of Education and Culture (MoEC) has gathered a workgroup to update the framework for the digital competence requirements for the teaching staff. As an outcome, an assessment tool called "Road to 21st Century Competencies" supporting teachers in evaluating how they plan their lessons, discovering their strengths, identifying where improvements have to be made, etc. was created and is based on the Finnish national curriculum. The Finnish national curriculum identifies 7 transversal competences, and ICT competence is one of them.



The competencies are listed as open, sectoral topics, ranging from mastering the legislation and copyright issues to the pedagogic, platform, and collaborative competencies.

^{[17].} Finnish National Board of Education, 2012

^{[18].} Finnish National Board of Education, 2012

^{[19].} CICERO Learning study 2008; OECD Nordic; European Schoolnet 2009; OECD/CERI 2010

^{[20].} Hievanen ym. 2015 ja Hievanen ym. 2014

^{[21].} Edupark Finland, Joensu

^{[22].} National Board of Education, 2012: 8

^{[23].} European Commission, 2015

^{[24].} https://www.ele.fi/assets/evaluation_framework_microsoft_final.pdf



7.2 Case studies

Name: Edukit

Keywords: virtual interaction, work-based learning, task management

Summary:

With Edukit, communication between students, teachers, and the workplace is instant and smooth. Edukit provides configurable alerts of new events to all parties, making it easy to react. The tool is designed for work-based learning and qualifications. Through the mobile app, students can easily interact with teachers and employers by documenting, reviewing, and communicating from anywhere, at any time.

The tool is divided into five features: work task management, mobile learning at the worksite, real-time collaboration, documentation for qualification, and info-view.

Through the work task management, students can monitor the progress of their learning in real-time and keep themselves updated with their overall learning status. Teachers and work instructors can support a skill of the work through Edukit. All documentation that is helpful and needed during the work task execution can be recorded in the app. Students can track time for work tasks. It teaches time monitoring for students. Work diary reports are available to students themselves and the company and educational institutes for their administrative purposes. The qualification view shows the work tasks organised by units of qualification for the student. Colour codes explain the state of the work task, derived from the formal competency requirements of the qualification. Assessors assess and approve work tasks for the qualification. Students and teachers can communicate through the app without being present at the work location.

The teachers can produce reports easily and the app manages integration with other systems.



[25]. http://www.edukit.fi/



Criteria	Web 2.0	Yes, how	No, how
Contributes to a VET teacher's continuing professional development plan	X	Need to develop skills in using ICT tools, communicate with the students remotely, provide counseling rather than teaching	
Is supporting the development of divergent thinking skills	Х	Students can interact in real-time with teachers and supervisors and share ideas, suggestions, etc.	
Is supporting the development of lateral thinking skills	Х	Students can put their learning into context and identify the new problem to tackle	
Is supporting the development of creative skills	X	Student are more active in their learning and inspired to make competency-based units of qualification on real working sites	
Is supporting the employability of students	Х	Students can contextualise their learning better and are more aware of the further skills they need to acquire	
Is supporting the development of DT toolkits for teachers	x	Teachers can share information, relevant content with the students directly	
Is developing industrial currency of teachers and working-life relevancy of education	X	Collaboration between the teachers, students, and enterprises is improved, the communication between the parties is smoother	
Has an element of innovation relevant to teachers	X	The app encourages the teacher to have more of a counselor role and to share extra material with the students	
Has proof of teacher & employer co-design	X	Teachers and enterprises are better aware of the progress of the students and can react quicker	



Name: Salo Vocational School of Visual Arts and Crafts

Keywords: digital professional footprint, digitalisation, career guidance

Summary:

At Salo Vocational School of Visual Arts and Crafts digitalisation is a central part of the studies and the development of competencies. "Salo visualists" represent pioneers in the field of training providers because of the ways of utilizing digitalization developed for years. The visual environment has been developed according to the guild school principles.

Digitalization is a facilitator of everyday activities, and it has become an additional source to acquire information and has also made communication with workplaces, distance students, and customers easier. The initial phase in creating proficient abilities in visual studies is that right off the bat, students set up a public blog that goes about as a learning diary, reporting their aptitudes in words and pictures, including source of data. Blogs are public, based on the principle of sharing information. Guides have been made available to facilitate the work and are accessible to all. A digital professional footprint/portfolio also applies to workplace experience and so, digitalisation is also utilized from the perspective of career guidance right from the start of the studies. Career guidance is implemented e.g. also by sharing job announcements with teachers on a shared Facebook group. Visual work can emphasis on boutique space, social marketing, or photography and graphic design.

The utilization of education supposedly has an effect on the students feeling of ability when it is archived and can return to and reflect their turn of events. There is additionally an effect on the network and group learning. The model also promotes entrepreneurship and reinforce the idea that learning does not take place in the warehouse, but that the work is always done for the customers, who also have to be acquired. Students also develop better self-assessment skills and professional development will be clearer as they become aware of information gaps and problem-solving skills that have been developed throughout their studies.

Besides joint group coaching, the group uses WhatsApp groups and other social media. Students are also involved in guidance and documentation, taking a turn on being the "secretary of the day" for the Facebook group, where the student records what they have agreed on during the day. The principle is that education uses the same solutions as in working life. This know-how is also exported to the workplace. During their on-the-job learning sessions, guide students how to use social media and produce online content.

In visual education, the concept can be much easier to implement than in many other areas. One of the main feedback from employers who have provided students training is that digital skills should meet the needs of the employer, regardless of the sector. Micro-companies cannot acquire specialized expertise for every task but require a wide scope of skill set. Students have introduced new ways of working in companies and influenced



companies' operating culture. They have produced marketing materials and product descriptions and also brought their suggestions and angles. ²⁶

Criteria	CPS	Yes, how	No, how
Contributes to a VET teacher's continuing professional development plan	X	Use of social media in teaching, getting updates on information sharing, career guidance, and counseling	
Is supporting the development of divergent thinking skills	X	Students have to come up with blog posts and actively look for solutions to identified gaps between their skills and working life requirements	
Is supporting the development of lateral thinking skills	X	Acquire problem-solving skills	
Is supporting the development of creative skills	X	Marketing documentation for companies, identifying consumers' needs, and acquiring new customers	
Is supporting the employability of students	Х	Students are better aware of the skills, connect better with employers, and are more active in their learning	
Is supporting the development of DT toolkits for teachers	X	Team learning / collaborative learning, focusing on consumers' needs	
Is developing industrial currency of teachers and working-life relevancy of education	X	Students are more reactive in the workplace, they are giving their perspective to the tasks, employers are satisfied with the students' ability, encouraging more collaboration with the education providers	
Has an element of innovation relevant to teachers	X	Use of existing technology for teaching purposes, the role of the teacher is more about career counseling and study guidance	
Has proof of teacher & employer co-design	Х		X

^{[26].} DIGITALISAATIO AMMATILLISESSA KOULUTUKSESSA (Digitalisation in VET schools), National Board of Education, Report 2018:9



7.3 Web 2.0 Tools for VET in Italy

Following the results of a research conducted in the framework of the European project SVEA by the Italian company CSP- Innovazione nelle ICT, which analyses the use of web 2.0 tools in the VET system it is possible to underline that in Italy the VET system has enlarged a lot its action even so, there are gaps to be overcome to have good educational use of web tools. The indicated research was focused on the investigation of needs, trends, and barriers in using web 2.0 applications within VET and adult training courses in the different regions and showed that web 2.0 applications used within training can have different functions depending on the activities of VET they are involved in.



In vocational training, Web 2.0 can help rethink educational practices by moving from a simple transfer of information "poured" into the learner to the creation of interaction models. Concerning the eight key competencies, it can help the formation of mature digital citizenship and sociality and the formation of a solid attitude to "learn to learn".

The National Digital School Plan (PNSD) of 2015 was the guiding document of the Ministry of Education, University and Research for the launch of an overall innovation strategy of the Italian school and for new positioning of its education system in the digital age: this plan is an operational vision that reflects the Government's position about the most important challenges of innovation in the public school system and the opportunities for digital education. This Plan is not a simple deployment of technology: no educational passage can prescind from intensive interaction with learning and technology cannot be distracted by this fundamental "human relationship".

This Plan responds to the call for the development of a vision of Education in the digital age, through a process that, for the school, is related to the challenges that society as a whole face in interpreting and supporting learning throughout the life (life-long) and in all contexts of life, formal and non-formal (life-wide): in this paradigm, digital technologies become enabling, daily, ordinary, at the service of school activities.



The Plan activates a process of "emergence" of networks, schools, and extracurricular actors who spontaneously initiated digital innovation processes through experiences, models, and training with a bottom-up innovation movement.



To do this, the plan sets out as primary objectives:

- · Providing all schools with the conditions for access to the information society;
- Making the "Right to the Internet" becomes a reality, starting from school;
- Covering the entire digital access chain of the school, to enable digital teaching.

It also defines learning spaces and environments to:

- Enhancing the digital infrastructure of the school with "light", sustainable and inclusive solutions
- Transforming school laboratories into places for the encounter between knowledge and know-how, placing innovation at the center
- Switching from solely "transmissive" teaching to active teaching, promoting flexible digital environments
- Aligning school construction with the evolution of teaching
- Rethinking the school as an educational interface open to the territory, inside and beyond school buildings.

Thanks to this plan, the examples of good practice in Italy are Growing up year per year: in recent years the process of opening the school to technologies has taken a new direction that aims to computerize its typical tools: books and blackboards are often replaced by e-books and IWBs.



7.4 Case studies

Name: ASNOR

An interesting case study in Italy provided by ASNOR - National Association of Career Guides promotes a new orientation culture, striving to recognize the professional role of the tutors.

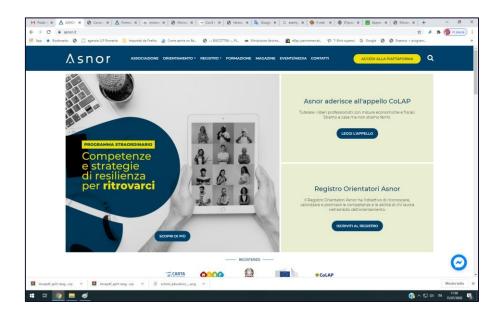
Asnor offers courses for the training of teachers and school staff, recognized by the MIUR. The Association is the only National Body that deals with orientation accredited by the Ministry of Education, University and Research for the training of school staff (Directive No. 170/2016).

The training is provided online, through an e-learning telematic platform available all day, every day (24h / 7g). The courses include video lessons, downloadable teaching materials, and a simulator to test the skills acquired. Training proposals are available for kindergarten teachers, primary and secondary schools, as well as for school staff. Particular attention is given to the topics of inclusive teaching and new technologies applied to teaching.

ASNOR school training courses for teachers:

- are inserted on the Sofia Platform and allow you to acquire credits that can be spent on Mandatory Teacher Training
- can be purchased using the Teacher's Card (read more)
- allow acquiring additional points that can be spent in public competitions and rankings for school teachers and staff.

More information on https://asnor.it/





7.5 Web 2.0 Tools for VET in the United Kingdom

The UK's curriculum is focusing more and more on ICT, moving it away from a lesson in itself, and towards using technology to explore different subjects. However, a bigger emphasis is being put on teaching more in-depth ICT lessons, with students learning about coding, programming, and developing.

Young people in the UK are technologically gifted. 97% of 15 to 24year olds have basic digital skills – and 0% have none. ²⁷ And this success is reflected in the technology industry: over 1,000 tech ventures are based in Britain. ²⁸

The initiative "eLearning: designing tomorrow's education", launched in May 2000 by the Commission, in response to the Lisbon Council, was endorsed by the European Council at its meeting in Feira in June 2000. ²⁹

The tools and technologies available have matured rapidly since then and improved to ensure the quality of eLearning.

The recent pandemic has impacted and affected our way of life. Most importantly, it has affected the education system. Above all, it has revealed the importance of remote learning methodologies, as well as digital tools in education.

Vocational and technical training

The following are an example of VET eLearning providers supported by the UK government.

^{[27].} Basic Digital Skills UK 2017 Findings https://www.thetechpartnership.com/globalassets/pdfs/ basic-digital-skills-standards/basicdigitalskills2016_findingssummary.pdf

^{[28].} https://www.ft.com/content/6e73096a-7675-11e5-933d-efcdc3c11c89?mhq5j=e1

^{[29].} European Council of Lisbon, "VET eLearning needs' data analysis report," Communication of 8 December 1999 on a Commission Initiative for the Special, March 2000.



7.6 Case studies

Name: Pearson Learning Hub

For career-focused learning, Pearson provides access to https://www.pearson.com/uk which contains a range of short online courses supporting BTEC, Apprenticeship, and Employability.

Read more >

Home of digital learning programmes

Learning Hub is a digital learning platform that is designed to deliver an engaging, accessible, interactive and personalised learning experience for learners, educators and employers.



Name: The National Skills Academy Food and Drink

The National Skills Academy Food and Drink are the industry experts on skills for the food and drink industry and have a range of programs available through their Online Academy. Their eLearning is available in areas such as compliance (Food Safety, Health & Safety), technical (allergen awareness, IOSH), personal development, IT, and management and leadership.

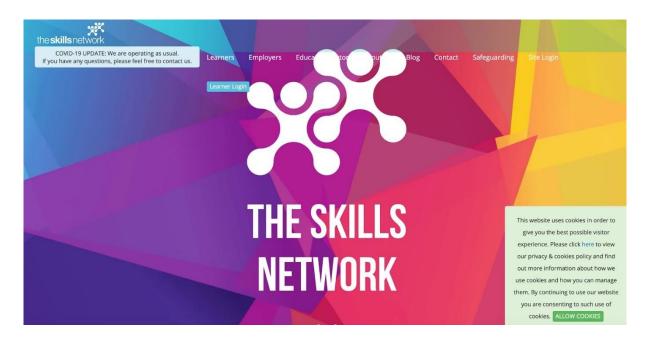




Name: The Skills Network

The Skills Network is a leading provider of distance learning qualifications with over 1 million users on the learning platform and over 40 UK Accredited qualifications and 100 CPD certified online courses. Courses include infection control and health and social care.

https://www.theskillsnetwork.com/learners/courses ³⁰



^{[30].} Basic Digital Skills UK 2017 Findings https://www.thetechpartnership.com/globalassets/pdfs/ basic-digital-skills-



7.7 Web 2.0 Tools for VFT in Greece

Context

The pedological use of ICT in modern schools and educational institutes in Greece is an important concern in today's era of the online learning environment. Internet is constantly developing and it is transformed from a space of searching for information into a space of content creation and collaboration among users.

The ICT has been expanded in almost every educational level. Social media are extremely popular in social network, a fact that couldn't be disinterested in the educational field. Considering that introducing the web 2.0 tools is a situation currently new for the relevant actors, there aren't plenty of surveys related to this new digitization in the Greek bibliography.

Vrettakos et all (2009) is presenting an empirical study regarding the use of web tools from Greek adult trainers in the educational methods that they use. During the implementation of this survey, in which over 30 adult educators were involved, tools as blogs, wikis, and others, related to a social network, were used. The study pointed out the crucial need for greater dissemination and information about these technologies as well as the need for the creation and planning of training projects and programs in the field of web 2.0 tools and its pedological use for the educators to keep up with the digital changes and to be prepared for even more changes in the educational system.

According to many testimonials from the abovementioned focus group, the adult educators seemed to be confident with the adoption of these technologies stating the process is going to be easy and approachable, provided that it will be accompanied by the relevant seminars and training courses. ³¹

However, we need to distinguish between learning to use digital tools and learning through the use of digital tools. The former was a major driver behind increases in participation in adult learning in the last decade. In many societies, the ubiquity of digital tools has meant that learning to use them (digital competence), is a less pressing concern in many areas. While there are undoubtedly groups that are excluded from the digital revolution through their lack of ICT skills (and, possibly, lack of access to those tools and the broadband connections that bring them alive), for more and more people use of digital tools is an everyday practice. So, the goal of adult educators should be not just encourage learning via digital means, but to ensure that the use of digital tools enhances learning – takes it to another level, rather than simply transferring a printed handout from paper to PowerPoint.

^{31. (}Anastasiades, P.S, & Kotsidis, K. (2013). The Challenges of Web 2. For Education in Greece: A Review of the Literature. International Journal of Web-based Learning and Teaching Technologies)



To sum up, digital technology in adult education is here to stay (until it goes the way of the overhead projector of course), and it is right that we are dedicating time and effort to exploring the best ways to exploit in the service of adult education. However, let us not forget that adult education is mediated by personal relationships and that the best adult educators can forge, and maintain these, and use them to support adults in learning.

Digital learning should enhance learning, not simply continue it via a digital means. We need to explore ways in which we can integrate technology to enable learners to actively engage with ideas and their peers, to enhance the learning experience, increase motivation, and provide a learning experience that approximates, or replicates, how adult access information and communicate with one another in the world outside the adult learning classroom. ³²

^{32. &}lt;a href="https://www.cretalive.gr/crete/seminario-me-thema-kainotoma-ekpaideytika-ergaleia-web-2-0-tools-gia-epaggelmaties-ths-ekpaideyshs-kai-katartishs">https://www.cretalive.gr/crete/seminario-me-thema-kainotoma-ekpaideytika-ergaleia-web-2-0-tools-gia-epaggelmaties-ths-ekpaideyshs-kai-katartishs



7.8 Case studies

Name: Web-based Learning and Asynchronous Teaching at the TEI of Crete, Greece

Keywords: Distance Learning, Asynchronous tele-teaching, e-class, ICT

Information and Communication Technologies (ICT) provide new possibilities for the creation of innovative effective environments of teaching and learning, by re-defining the educational frameworks and by deploying new learning facilities.

The various platforms of tele education, like those of asynchronous tele-teaching, can be used for the development of environments of remotely teaching and/or as an additional tool of the conventional educational process.

The primary aim of the present empiric research is the evaluation of Web-based asynchronous tele-teaching at the TEI (Technological Education Institute) of Crete, Greece. Based on semi directive interviews with students and academic staff as well as addressing questionnaires in the involved population (students & instructors), they are trying to study their new roles and the new practices that emerge in a virtual learning environment. The analysis was based on qualitative and quantitative methods. Amongst the findings and outcomes that emerge from this study, are the importance of the pedagogic framework and the efficiency of the learning management system for wide exploitation of asynchronous distance education at an institution of tertiary education.

(Web-based Learning and Asynchronous Teaching at the TEI of Crete, Greece, G.M. Papadourakis, Y. Kaliakatsos, and D. Paschaloudis)



7.9 Web 2.0 Tools for VET in Poland

According to statistics from GUS (Central Statistical Office in Poland), the number of internet users in Poland remains constant compared to 2018 - at the end of 2019, almost 28 million people were using the internet. In December 2019, almost 23.5 million people were connecting to the Internet via mobile devices and almost 23 million via a PC. As in the previous year, the number of internet users using smartphones is higher than the number of internet users using computers.

Numerous adult don't have the right skills they require to prevail in an advanced, quick evolving world. Half of grown-ups have no or just restricted involvement with utilizing PCs or don't trust in their capacity to utilize PCs compared with a average of 25% of adult in the remainder of the OECD nations. Many adults are not motivated to learn or face obstacles preventing them from participating in education and training.

Despite significant progress, a strengthening of the activation of skills in the labour market is welcome. ³³

The Polish strategy under development predicts the introduction of changes to the education system and to increase coordination between the government and stakeholders. The result of the CATI survey shows companies cooperate more often with non-public continuing education institutions than with public institutions such as schools. Enterprises cooperate with training companies (31%), followed by training and vocational training centres (23%) and non-public continuing and practical education institutions (14%). ³⁴

Besides, there is still a need to disseminate knowledge about the possibilities of using the ICT for VET, the job market, and Lifelong Learning.

Using tools Web 2.0 is an ongoing process and is going to be accompanied by the relevant information and education. Using tools Web 2.0 for VET is more common in the private sector.

The adult educators in the public sector seemed to be not so confident with the adoption of these technologies. ³⁵

^{33.} STRATEGIA UMIEJĘTNOŚCI OECD: POLSKA © OECD 2019 http://www.oecd.org/employment/emp/Skills-strategy-poland-report-summary-PL.pdf

^{34.} Evaluation of extracurricular forms of adult education - final report, 2018 https://www.cretalive.gr/crete/seminario-me-thema-kainotoma-ekpaidevtika-ergaleia-web-2-0-tools-gia-epaggelmaties-ths-ekpaidevshs-kai-katartishs

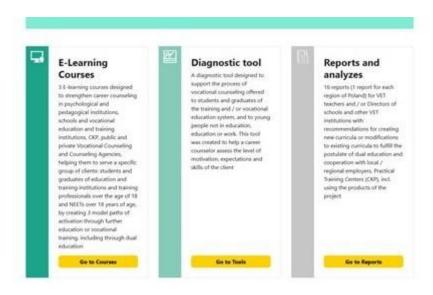
^{35.} TECHNOLOGIA A PRACA: NOWE KOMPETENCJE A STARE REGUŁY, CZYLI O WIRTUALNYM ŚWIECIE, JEGO MOŻLIWOŚCIACH I WYMAGANIACH Izabela Maria Stefaniak, Uniwersytet Ekonomiczny w Katowicach https://www.ue.katowice.pl/fileadmin/migrated/content_uploads/15 Stefaniak Technologia a praca.pdf



7.10 Case studies

Name Dual, the digital platform related to vocational education and training as well as training in the dual system, Poland.

Keywords: VET, career advisors support, dual education, training in the dual system



The digital platform related to vocational education and training as well as training in the dual system was created in the project entitled "DUAL. Transnational cooperation to support dual education in vocational training and education institutions "(POWR.04.03.00-00-W338 / 16) - this tool is intended to support the implementation of the dual education postulate and to strengthen career counseling in vocational training and education institutions and career advisors.

The platform includes, among others 3 e-learning courses - digital products to help career advisors to serve a specific group of people: students and graduates of vocational education and training institutions and young people "NEET" (not in employment, education or training), that is, not in education, training or in employment. These courses constitute 3 model paths of activation of the above-mentioned clients of career advisors (a separate path for students, graduates, and NEETs) through further education or vocational training, including through dual education.

A diagnostic tool designed to support the career advising processis also available on the platform for target groups. This tool was created to help a career advising assess the level of motivation, expectations, and skills of the client.



In addition to the above-mentioned products to strengthen career advising, the platform also includes products aimed at supporting the implementation of the dual education postulate – reports and analyses introduced in the project, including 16 reports (1 report for each region of Poland) for training teachers and vocational education and/or Heads of schools and other vocational education and training institutions with recommendations for the creation of new curricula or modifications to existing curricula to fulfill the postulate of dual education and cooperation with local/regional employers or Practical Training Centres (CKP), .in. using the products of the project.

Source: https://www.projektdual.pl/o-platformie







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