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Erasmus+ Programme
of the European Union

VI-TRAIN
VIrtual TRAINing for traditional crafts

IO 1: (National) Study on available virtual education for craftspersons of historic buildings

VI-TRAIN-Crafts - VIrtuell TRAINing for traditional Crafts

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Provided by:

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Content

1 Publishable executive summary

Cultural Heritage (CH) is in the focus of the European Union as motor for employment, economic drive and development. In order to guarantee longevity & usability of European Heritage it is inevitable to keep up with the requirements of society like new technology and digitisation.
The Covid19 crisis added some urgency to the issue as training organisations strongly suffer from restrictions and new rules, which are threatening traditional education and training activities. Especially in regards to hands-on-training, where instructors need to get really close to learners in order to teach practical skills.
The consortium of VI-TRAIN-Crafts takes on the challenge of developing innovative training for traditional/threatened crafts and handling of building damages, which will boost the digitisation of training in (built) Cultural Heritage. A big focus is given to crafts that are almost nowhere trained any more. Lots of those crafts do need a lot of experience and guidance by experienced craftspeople. This training in particular will be boosted by various digitisation support.
The anticipated objectives of VI-TRAIN-Crafts are:

- to identify appropriate means of distance learning for the training of craftspeople (manual work),
- to identify appropriate means of online cooperation in training, regarding functionality, GDPR and data security
- to derive success criteria for highly accepted digital solutions
- to develop and test a virtual/3D-crafts training system by using sensors and VR/AR
- to develop and test a virtual/3D-buidling damage identification training system
- to investigate and test options overcoming restrictions, e.g. move sickness,
- to develop a train-the-trainer system for application of selected tools in training of traditional crafts

Participants of the courses developed in VI-TRAIN-Crafts can obtain a European certificate by undergoing a certification process provided by ECQA (www.ecqa.org), which is an internationally active organisation specialised in certification of skills and competences.
VI-TRAIN-Crafts nicely enriches the offer of The European Heritage Academy (EHA), which will be in charge of delivering VI-TRAIN-Crafts training courses after completion of the project. EHA is situated at Charterhouse Mauerbach, the future EU Competence and Community Centre for Architectural Conservation, being set up during INCREAS, a Pilot project for Cultural and Creative Industries, Finance, Learning, Innovation and Patenting for Cultural and Creative Industries (FLIP for CCIs-2).

2 EU-Definitions of Formal, Non-formal and Informal Education[1]

2.1 Type of Education

2.1.1 Formal Education

Formal learning is the learning that occurs in an organised and structured environment (e.g. in an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to validation and certification.

2.1.2 Non-formal Education

Non-formal learning is a learning which is embedded in planned activities not always explicitly designated as learning (in terms of learning objectives, learning time or learning support), but which contains an important learning element. Non-formal learning is intentional from the learner's point of view.

2.1.3 Informal Education

Beside this, Informal learning means a learning resulting from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support. Informal learning is mostly unintentional from the learner's perspective.

[1] Source: Cedefop, (2009), European Guidelines for Validating Non-formal and Informal Learning, Luxembourg: Office for Official Publications of the European Communities, ISBN 978-92-896-0602-8

2.2 Level of Education

Level	Knowledge	Skills	Responsibility and autonomy	Example
	In the context of EQF, knowledge is described as theoretical and/or factual.	**In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).**	**In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility**	
Level 1	Basic general knowledge	basic skills required to carry out simple tasks	work or study under direct supervision in a structured context	
Level 2	Basic factual knowledge of a field of work or study	basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	work or study under supervision with some autonomy	
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems	
Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities	(Austria) Matura, vocational school, (Portugal) A double certification – a professional qualification and a 12th year school leaving diploma, (Spain) Título profesional básico, (Slovakia) vysvedčenie o maturitnej skúške
Level 5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others	(Austria) HTL, (Portugal) Diploma de Especialização Tecnológica (DET), (Spain) Título profesional básico, (Slovakia) diplomovaný špecialista

Level	Knowledge	Skills	Responsibility and autonomy	Example
Level 6	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups	(Austria) Vocational university State-certified Engineer, German Operative Professional, German Meister; (Spain) Diplomado or Grado;
Level 7	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams	(Austria) Vocational university (Fachhochschule) Master's; (Spain) Licenciado or Máster; (Portugal) Mestrado
Level 8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research	Doctorate, PhD, Professional Doctorate, RQF level 8; (Italy) Dottorato di ricerca,

For the survey we are looking for education on following level

- Higher Education (HEC) → EQF level 6-8
- Vocational Education & Training (VET) → EQF level 4-5
- Secondary School → EQF level 3-4

2.3 Type of Virtual Training

The research of virtual training offers contained following types of virtual training offers:

1. Simulation of work results
   Simulation is a model of a set of problems or events that can be used to teach someone how to do something, or the process of making such a model resp. a model of a real activity, created for training purposes or to solve a problem. Usually, it could be a real model to train the required skills in a place like a course or a virtual model to train the required skills in the digital world. In this context, VI-TRAIN-Crafts used Simulation for simulating the work result like simulating the welding seam.

2. Interactive online training in VR
   Virtual Reality is an artificial environment in which the user is fully immersed in an experience. Putting on a VR headset relocate a learner to a new place where they can look around themselves, move to and away from computer-generated objects, and interact with items and other (real or virtual) people.

   There are two types of setting for virtual reality:

   3DoF or Three Degrees of Freedom
   Well-suited for seated or stationary environments, as the position of the learners' viewpoint, is fixed. Learners can interact with the environment by gaze control or a laser pointer controller. These experiences are appropriate for many learning needs, including soft skills, branched learning, and clinical and operational training.

   6DoF or Six Degrees of Freedom
   It allows a person with a headset to move freely and organically in a virtual environment. Learners can observe and walk or move around objects placed in the environment, just like they would if those objects were real.

3. Interactive online training in AR
   Augmented reality is understood as an enhanced version of reality created by the use of technology to overlay digital information on an image of something being viewed through a device (such as a smartphone camera).

2.4 Other definitions

2.4.1 Interactive training

It is a form of training, in which learners learn by doing and are active participants in the knowledge gaining process rather than passive absorbers of information. Interactive training is not about sitting back, watching videos or presentations, and clicking the next button. It involves problem-solving, analysing scenarios and real-life decision-making. With interactive learning, learners will gain new knowledge and sharpen their critical, analytical and creative skills.

2.4.2 Virtual training

Following existing definition, Virtual training is a training method in which a simulated virtual environment is used. In this environment, a trainer / an instructor is able to explain, demonstrate, test and validate certain abilities that can contribute to the learning process.

2.4.3 Online training

Online Training is known as computer based training (CBT), distance learning, or e-learning, online training is a form of instruction that takes place completely on the internet. It involves a variety of multimedia elements like graphics, audio, video, and web-links, which all can be accessed through an internet browser. These elements are used instead of traditional classroom components.

2.5 General approach

The consortium follows following general approach:

1. Internet and network research by each partner (focussed on virtual training means)
2. Assessment of first results
3. Adapted internet and network research by each partner (enlarged to virtual means in general)
4. Assessment of 2nd round results
5. Report on the findings

There was interviews step planned with tool experts before report reporting. Due to fact that there was a lack of proper virtual training means no experts were available. Therefore, no interviews were conducted by the consortium.

2.6 Structure of survey

Criteria for selecting VI-TRAIN-Crafts Best Practice Examples:

1. Trainers & Trainees at different locations
2. Realtime action for Trainers & Trainees
3. Trained skills: handcraft, manual work in traditional crafts

1.Name Partner

- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example

3.Country of origin

- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences

5.Level of Education

- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education

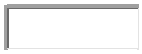
- formal education
- informal education
- non-formal education

7.Type of Virtual Training

- simulation
- interactive online training in VR
- interactive online training in AR
-

8.Website / Information about training

9.Description of training



10.Required equipment, if known

11.Organisation running this training

12.Address:

13.Ownership

- private
- public

3 Assessment of relevant tools

3.1 Example 1: "Virtual welding"

1.Name Partner

- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
Virtual welding

3.Country of origin

- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands

- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
Trainees are trained for welding

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
- interactive VR Training

8.Website / Information about training
https://de.industryarena.com/emagazine/01-2017/virtuell-schweissen-in-der-lehrlingswerkstatt.html

9.Description of training
Training of how to correctly weld for trainees. They have the correct equipment that is tracked (weight) and so the muscles are trained well on handling the device.

10.Required equipment, if known
VR Equipment

11.Organisation running this training
Fronius

12.Adress:

13.Ownership
- private
- public

3.2 Example 2 "Training School in Crafts"

1.Name Partner
- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
Training School in Crafts, Restoration and Rehabilitation of Historical and Cultural Heritage Albayzin

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia

- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
Recovery, repair and artistic maintenance, manufacture and maintenance of musical instruments and artisanal glass and ceramics, arts and crafts

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
- interactive online training (e.g. AR)

8.Website / Information about training
https://www.juntadeandalucia.es/organismos/sae/areas/mejora-empleabilidad/fpe/paginas/escuela-artesania-albayzin.html#toc-oferta-formativa

9.Description of training
Courses related to traditional trades to other specialties that are exclusive to this School

10.Required equipment, if known

11.Organisation running this training
Training School in Crafts, Restoration and Rehabilitation of Historical and Cultural Heritage Albayzin

12.Adress:
Pcta. de la Concepción, 1, 18010 Granada

13.Ownership
- private
- public

3.3 Example 3 "VREDIE"

1.Name Partner
- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
VREDIE

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece

- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
realistic VR simulation in handling machines and tools, Intelligent assistance system for guiding complex production processes, Analysis and evaluation of skills and work progress and motivation training

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
-

8.Website / Information about training
https://vredie.com/

9.Description of training
tool which can be adapted for training purposes

10.Required equipment, if known
VR glasses, VR engines, VR sensors

11.Organisation running this training
VISUALIMPRESSION

12.Adress:
Jean-Burger-Straße 2, 39112 Magdeburg

13.Ownership
- private
- public

3.4 Example 4 "Cursodigitalizacion I"

1.Name Partner
- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
https://www.cursodigitalizacion.com/presentacion/

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France

- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
Digitization of Cultural Heritage, basic skills and knowledge about basic technical and legal issues (digital documents and images, management and dissemination of digital objects)

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
- Synchronous online learning

8.Website / Information about training
https://www.cursodigitalizacion.com/presentacion/

9.Description of training
Basic online course (500 hs) about the technical and legal principles of digitization - very remote application to heritage (but in the title) - this may be intended as long-life learning, as there is explicit references to how workers can apply for full reimbursement of the inscription fees from FUNDAE foundation)

10.Required equipment, if known

11.Organisation running this training
Fundación UNED (https://www.fundacion.uned.es)

12.Adress:

13.Ownership
- private
- public

3.5 Example 5 "Cursodigitalizacion II"

1.Name Partner
- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
Advance Management of Projects to Digitize Cultural Heritage
(https://www.cursodigitalizacion.com/gestiondeproyectosdigitalizacion/presentacion/)

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic

- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
Digitization of cultural heritage, management of digitized cultural heritage, management of projects to preserve cultural heritage digitally

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training

- simulation
- interactive online training in VR
- interactive online training in AR
- online synchronous classes and contents uploaded to a platform

8.Website / Information about training
https://www.cursodigitalizacion.com/gestiondeproyectosdigitalizacion/presentacion/

9.Description of training
Technical and legal aspects, management of projects to preserve.

10.Required equipment, if known

11.Organisation running this training
UNED Foundation

12.Adress:
Fundación UNED C/ Guzmán el Bueno, 133 - Edificio Germania, 1ª planta 28003 Madrid)

13.Ownership

- private
- public

3.6 Example 6 "3D modeling and 3D printing in the Digital Design Lab"

1.Name Partner

- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
3D modeling and 3D printing in the Digital Design Lab of the Hungarian University of Fine Arts, Budapest

3.Country of origin

- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences

3D modeling and 3D printing for the students of Stone Sculpture Conservation, optional

5.Level of Education

- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education

- formal education
- informal education
- non-formal education

7.Type of Virtual Training

- simulation
- interactive online training in VR
- interactive online training in AR
- 3D modeling

8.Website / Information about training
www.dflab.org I http://www.mke.hu/en/node/33652

9.Description of training
3D modeling, 3D printing for the students of Stone Sculpture Conservation I optional I the students could model their master objects for conservation, using 3D model software, and 3D printing

10.Required equipment, if known
3D software like ZBrush

11.Organisation running this training
Digital Design Lab I Department of Artistic Anatomy, Drawing and Geometry I Hungarian University of Fine Arts, Budapest

12.Adress:
1062 Budapest, Andrássy út 69-71.

13.Ownership

- private
- public

3.7 Example 7 "3D modeling, 3D printing for the students of Ceramic Design"

1.Name Partner

- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal

- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
3D modeling, 3D printing for the students of Ceramic Design MA I University of Pécs I Faculty of Music and Visual Arts I Design and Media Art Institute I Ceramic Design MA

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
-

4.Trained Skills / Competences
3D modeling, 3D printing for the students of Ceramic Design MA

5.Level of Education

- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education

- formal education
- informal education
- non-formal education

7.Type of Virtual Training

- simulation
- interactive online training in VR
- interactive online training in AR
- 3D modelling and 3D printing

8.Website / Information about training
https://international.pte.hu/

9.Description of training
3D modeling (Blender software), 3D printing (CNC milling machine, 3D printing in plastic, 3D printing in ceramics) for the students of Ceramic Design MA

10.Required equipment, if known
3D modeling software and 3D printers

11.Organisation running this training
University of Pécs I Faculty of Music and Visual Arts I Design and Media Art Institute I Ceramic Design MA

12.Adress:
7622 Pécs, Vasvári Pál u. 4.

13.Ownership

- private
- public

3.8 Example 8 "Learn About Art"

1.Name Partner

- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia
- ECQA GmbH / Austria

- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
"Learn About Art"

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- USA

4.Trained Skills / Competences
Graphic arts, photography, painting

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
- online learning community for people who want to learn from educational videos

8.Website / Information about training
https://join.skillshare.com/pt-br-classes-de-artes

9.Description of training
The courses, which are not accredited, are available through subscription. The majority of courses focus on interaction rather than lecturing, with the primary goal of learning by completing a project.

10.Required equipment, if known

11.Organisation running this training
Skillshare, Inc.

12.Adress:
New York, State of NY, USA

13.Ownership
- private
- public

3.9 Example 9 "Masterclass"

1.Name Partner
- IMC Fachhochschule Krems GmbH / Austria
- Národný Trust n.o. / Slovakia

- ECQA GmbH / Austria
- UBW Unternehmensberatung Wagenhofer GmbH / Austria
- magyar reneszansz alapitvany / Hungary
- Asociación Española de Gestores de Patrimonio Cultural / Spain
- Secretaria Geral da Presidencia da República / Portugal
- Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
Masterclass

3.Country of origin
- Austria
- Belgium
- Bulgaria
- Croatia
- Republic of Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Poland
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- USA

4.Trained Skills / Competences
creative writing, master recipes, acting, song writing

5.Level of Education
- Higher Education (HEC)
- Vocational Education & Training (VET)
- Secondary School

6.Type of Education
- formal education
- informal education
- non-formal education

7.Type of Virtual Training
- simulation
- interactive online training in VR
- interactive online training in AR
-

8.Website / Information about training
https://www.masterclass.com/

9.Description of training
Online education subscription platform on which students can access tutorials and lectures pre-recorded by experts in various fields.

10.Required equipment, if known

11.Organisation running this training
Yanka Industries, Inc

12.Adress:
San Francisco California, USA

13.Ownership
- private
- public

3.10 Example 9 "PotteryGo"

1.Name Partner

- ○ IMC Fachhochschule Krems GmbH / Austria
- ○ Národný Trust n.o. / Slovakia
- ○ ECQA GmbH / Austria
- ○ UBW Unternehmensberatung Wagenhofer GmbH / Austria
- ○ magyar reneszansz alapitvany / Hungary
- ○ Asociación Española de Gestores de Patrimonio Cultural / Spain
- ○ Secretaria Geral da Presidencia da República / Portugal
- ◉ Universidad del Pais Vasco / Euskal Herriko Unibertsitatea / Spain

2.Title of Best Practice Example
PotteryGo: A Virtual Pottery Making Training System

3.Country of origin

- ○ Austria
- ○ Belgium
- ○ Bulgaria
- ○ Croatia
- ○ Republic of Cyprus
- ○ Czech Republic
- ○ Denmark
- ○ Estonia
- ○ Finland
- ○ France
- ○ Germany
- ○ Greece
- ○ Hungary
- ○ Ireland
- ○ Italy
- ○ Latvia
- ○ Lithuania
- ○ Luxembourg
- ○ Malta
- ○ Netherlands
- ○ Portugal
- ○ Poland

- ○ Romania
- ○ Slovakia
- ○ Slovenia
- ○ Spain
- ○ Sweden
- ◉ Taiwan

4.Trained Skills / Competences
Pottery (Clay Vessels) Making

5.Level of Education
- ○ Higher Education (HEC)
- ◉ Vocational Education & Training (VET)
- ○ Secondary School

6.Type of Education
- ○ formal education
- ○ informal education
- ◉ non-formal education

7.Type of Virtual Training
- ○ simulation
- ◉ interactive online training in VR
- ○ interactive online training in AR

8.Website / Information about training
https://ieeexplore.ieee.org/document/8336837

9.Description of training
A novel instructional system referred to as PotteryGo, which integrates sensor-based gesture recognition with 3D modeling techniques within a virtual-reality environment. Deformations in the virtual vessels are controlled using hand gestures detected by motion sensors. These objectives are achieved by 1) providing tutorials on the fundamental techniques used in pottery-making; 2) providing step-by-step visual guidance and feedback while users practice creating pieces based on specific models; 3) allowing users to create custom pottery pieces based on the models.

10.Required equipment, if known

11.Organisation running this training
National Taipei University of Technology

12.Adress:

13.Ownership

- ○ private
- ◉ public

4 Conclusions

4.1 Summary of achievements

The result of the internet research regarding virtual trainings for manual craft work was not really productive. There is no virtual training for manual craft work available on the market. Based on this conclusion the consortium looked for offers which could be used in training context. In total, there are 10 offers available which seems to be of interest for VI-TRAIN-Crafts purposes.

1 Virtual welding

2 Training School in Crafts, Restoration and Rehabilitation of Historical and Cultural Heritage Albayzin

3 VREDIE

4 Cursodigitalizacion I

5 Cursodigitalizacion II

6 3D modeling and 3D printing in the Digital Design Lab of the Hungarian University of Fine Arts, Budapest

7 3D modeling, 3D printing for the students of Ceramic Design MA I University of Pécs I Faculty of Music and Visual Arts I Design and Media Art Institute I Ceramic Design MA

8 "Learn About Art"

9 Masterclass

10 PotteryGo: A Virtual Pottery Making Training System

For the further Intellectual Outputs, it will be still a challenge to use one of the mentioned systems. The consortium needs to decide how to virtualise the training of manual craft work could happen. For this purpose, the consortium will define several scenarios of virtualisation. All these scenarios will be assessed in regard of technological and economic feasibility.

Due to the results, the consortium found the name of the deliverable should be “Study on available education for craftspersons of historic buildings”, because there is only one report generated with all results.

4.2 Contact to the Coordinator´s Data Protect Officer

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5 Acronyms and terms

3D ..... three dimensional
AR..... Augmented Reality
Cert. ..... certified
GDPR ..... General Data Protection Rule
MHA..... Maintenance Manager for Cultural Heritage (Asset)
THA..... Trainer for Cultural Heritage (Asset)
VR..... Virtual Reality