



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

KA202 - 2020

VR - PROJECTX



XABEC – VOCATIONAL TRAINING CENTER

Ignacio Ferrer Ballester
ignacio.ferrer@xabec.es

Valencia, 3th November 2020



GOAL

TO TRANSFORM THE PROJECTX METHODOLOGY IN VIRTUAL REALITY
VR-PROJECTX



WHY VIRTUAL REALITY

- INCREASING THE DEMAND OF ON-LINE/BLENDED LEARNING

- EU GOAL: RATE OF WORKFORCE QUALIFIED
- DEVELOPMENT OF E-LEARNING PRODUCED BY COVID
- TEACHERS NEED TOOLS FOR E-LEARNING PLATFORMS IN BLENDED LEARNING

- TO DO SPECIALIZED TASKS THAT CAN NOT BE DONE IN WORKSHOPS OF TRAINING CENTERS



- PREPARATION OF MOBILITY OF STUDENTS

- TO INCREASE THE INTEREST OF YOUNG PEOPLE FOR VET.

THE TEAM

STRENGTHS



EXPERIENCE IN PROJECTX METHODOLOGY

EXPERIENCE IN BLENDED LEARNING

EXPERIENCE IN MECHANICS, AUTOMATION, TRAINS, INSTALLATIONS

EXPERIENCE IN MOBILITY OF STUDENTS

CENTRO INTEGRADO DE FORMACIÓN PROFESIONAL



ESCOLA PROFISSIONAL ValdoRio www.valdorrio.net

EXPERIENCE IN PROJECTX METHODOLOGY

PROVIDERS OF 3D DESIGN COURSES

ELECTRICITY TRAINING COURSES

MEMBER OF INNMAIN



Höhere Fachschule Südstschweiz MEMBER OF INNMAIN

TECHNICAL SCHOOL IN MECHATRONICS

Meine Schule. Meine Zukunft. RESOURCES RESOURCES



SPECIALIZED IN VR AND AR

EXPERIENCE IN VR MODULES FOR TRAINING COURSES

COMPANIES – GLOBAL OMNIUM

THE TEAM

STRENGTHS



EXPERIENCE IN 3D DESIGN: DIGITAL FABRICATION
FABLAB NETWORK
EXPERIENCE IN MOBILITY OF STUDENTS



CONSULTANCY OF VET EDUCATION
WORK-BASED LEARNING
LEARNING,
JOB PROFILES AND CURRICULA DESIGN



EXPERIENCE IN 3D DESIGN
EXPERIENCE IN KA2 PROJECTS.
LINKED TO SEVERAL EDUCATIONAL NETWORKS
ENGINEERING

THE WAY

- TRANSFORMING A PEDAGOGICAL METHODOLOGY FOR VET , TESTED AND RECOGNIZED BY EU (PROJECTX METHODOLOGY) IN VIRTUAL REALITY.

PROJECTX
METHODOLOGY

VR-PROJECTX
METHODOLOGY

The Present

VET Excellence
Award – 2018
European
Commission

The future....



BACKGROUND

PREVIOUS KA2 PROJECTS



PAST

LEARNING OUTCOMES

PRESENT FUTURE

PROJECTX VRPROJECTX

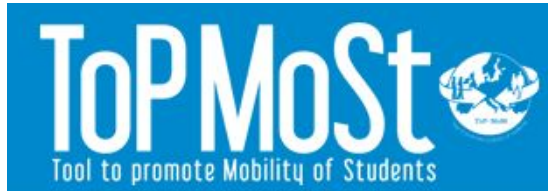
Learning Outcomes
Web site

ProjectX Methodology
Web site

VET Excellence Award – 2018
European Commission

The future....

THE PAST: TOPMOST



Promote MObility of STudents

The GOAL

Quality Mobility of VET Students

The KEY of the Quality

EU VET Framework – EQF

Assesment – Recognition – Accreditation

The minimum unit can be recognized:

LEARNING OUTCOMES -ECVET

Common Training Areas

PARTNERS from INNMAIN

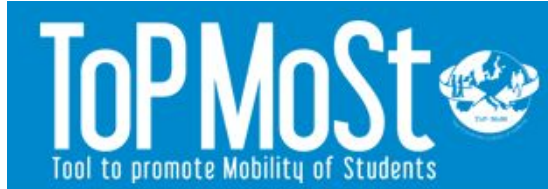
The TOOL (Intellectual Output)

A database of Common Learning Outcomes

<http://www.topmost.es/intranet/login/>



THE PAST: TOPMOST



to promote MObility of STudents



TOPMOST TOOL

This is an excellent tool for the Learning Agreement a for the Quality of the mobility

BUT

¿How can a student acquire a Learning outcome in the training center during the mobility?

WE NEED A **METHODOLOGY**

Learning by doing: practical tasks related to the Learning Outcome (Knowledge, skills and competence)

THE PRESENT: ONE2ONE



teacher and one Student working by ProjectX.

What is a ProjectX

A methodological guide for the student to carry out a concrete activity, one to one with the teacher, in which *theory and practice are both perfectly integrated and is related to the real workplace*

Each course is divided in short projectX that are related to a set of Learning Outcomes of the official curricula.

ProjectX = Project + eXperience



THE PRESENT: ONE2ONE



acher and one Student working by ProjectX.

Advantadges

- Individual learning rythms: personal planning for each student
- It can be used for the mobility of students becaused is based in the minimum unit of recognition: Learning Outcomes.
- Tomorrow: Guillermo will explain the design process of a ProjectX: templates, methodological aspects, etc

Examples

- List of ProjectX for mobility of students: <http://projectxone2one.eu/project-x/>

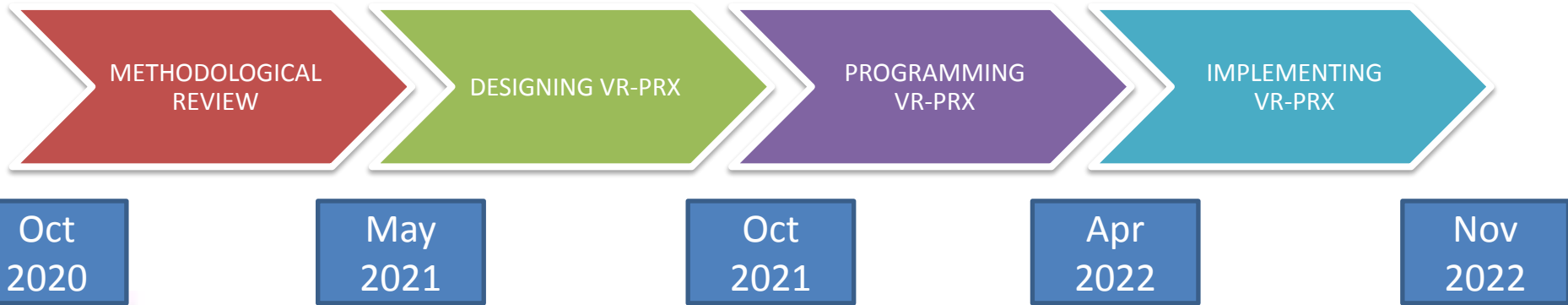
THE FUTURE: VR PROJECTX



Reality PROJECTX

er construction

STEPS OF THE PROJECT



FIRST STEP

GOALS

- REVIEW OF THE PROJECTX METHODOLOGY
- REVIEW OF VIRTUAL REALITY TECHNOLOGY
- REVIEW OF THE E-LEARNING PLATFORMS

METHODODOLOGICAL REVIEW

OUTPUTS

WHO

WHEN

VRPROJECTX HANDBOOK: A GUIDE FOR TEACHERS TO CREATE A VR PROJECTX

XBC - VDR

Dec.-2020

PROPOSAL OF VR-PROJECTX'S (4)

XBC-VDR-IBW-G
UIA

Apr-2021

ACTIVITIES

WHO

WHEN

KICK-OFF MEETING

XBC

Nov-2020

ON-LINE MEETING

XBC

Jan-2021

FIRST STEP: GANTT DIAGRAM

METHODOLOGICAL REVIEW

			YEAR 2020				YEAR 2021		
			STEP 1: METHODOLOGY REVIEW						
			Month						
ID	Description	Responsible	oct	nov	dec	jan	feb	mar	apr
			1	2	3	4	5	6	7
TA1	Technical coordination	XBC							
QA0	Quality Control	UPV							
R1	Kick-off meeting	XBC		R1					
TA2	Adaptation of the Project Methodology to VR	DYP							
TA3	Learning outcomes review	IBW							
TA4	Selection of the e-learning platform	UPV-TAW							
IO1	VR-ProjectX handbook	XBC							
TA5	Website of the project	TAW							
RO	On line meeting: selection of the VRProjectX	XBC				RO			
QA1	Quality report	UPV							
IO2.1	Template of VR-ProjectX 1	XBC							
IO2.2	Template of VR-ProjectX 2	VDR							
IO2.3	Template of VR-ProjectX 3	IBW							
IO2.4	Template of VR-ProjectX 4	GUIA							

SECOND STEP

GOALS

- PREPARING THE 3D/2D DESIGN OF VR MODULES
- PREPARING THE SCRIPT OF THE VR MODULES
- ANALYSIS OF THE DEVICES FOR VR MODULES



OUTPUTS	WHO	WHEN
2D Design models of the ProjectX's	VDR – UPV - TAW	Sept - 2021
3D Design models of the ProjectX's	VDR – UPV - TAW	Sept - 2021
Scripts of VR modules	IBW-XBC-GUIA-V DR	Sept - 2021
Interface of the VR modules	DYP	Sept - 2021
ACTIVITIES	WHO	WHEN
Second Meeting	TAW	May-2021

SECOND STEP: GANTT DIAGRAM

DESIGNING
VR-PROJECTX

			YEAR 2021				
			STEP 2: DESIGN				
			Month				
			may	jun	jul	aug	sept
ID	Description	Responsible	8	9	10	11	12
R2	2nd Meeting: preparing step 2	TAW	R2				
TA6	2D design for VR-ProjectX 1, 2, 3 and 4.	VDR - UPV - TAW					
TA7	3D design for VR-ProjectX 1, 2, 3 and 4.	VDR - UPV - TAW					
TA8	Script and task flow for each VRProjectX.	XBC - VDR - IBW - GUIA					
TA9	Selection of the devices for VR Modules	DYP					
TA10	Definition of the interface of the VR Modules	DYP					

THIRD STEP

GOALS

- PROGRAMMING THE VR PROJECTX'S



OUTPUTS

Programming **VR ProjectX 1**

Programming **VR ProjectX 2**

Programming **VR ProjectX 3**

Programming **VR ProjectX 4**

WHO

DYP-XBC

DYP-VDR

DYP-IBW

DYP-GUI

WHEN

March- 2022

March- 2022

March- 2022

March- 2022

ACTIVITIES

Third Meeting

WHO

VDR

WHEN

Oct-2021

THIRD STEP: GANTT DIAGRAM

PROGRAMMING
VR-PROJECTX

			YEAR 2021			YEAR 2022		
			STEP 3: PROGRAMMING					
			Month					
			oct	nov	dec	jan	feb	mar
<i>ID</i>	<i>Description</i>	<i>Responsible</i>	13	14	15	16	17	18
R3	3th meeting: review step 2 and preparing step 3	VDR	R3					
QA1	Interim Report	XBC						
TA11	Programming the interface of the VR Modules	DYP						
TA12	Programming VR-ProjectX 1, 2, 3 y 4	DYP						
IO3.1	VR ProjectX 1	DYP						
IO3.2	VR ProjectX 2	DYP						
IO3.3	VR ProjectX 3	DYP						
IO3.4	VR ProjectX 4	DYP						

FOURTH STEP

GOALS

- IMPLEMENTATION IN E-LEARNING PLATFORM
- TEST AND IMPROVEMENTS
- MULTIPLIERS EVENTS

OUTPUTS

VRProjects implemented in **e-learning platform**

5 Multiplier events

WHO

UPV-GUI

XBC-VDR-IBW-DY
P-GUI

WHEN

May- 2022

Jul- 2022

ACTIVITIES

Fourth Meeting

Final Meeting

WHO

GUI

UPV

WHEN

Apr-2022

Oct-2022

IMPLEMENTING
VR-PROJECTX

FOURTH STEP: GANTT DIAGRAM

IMPLEMENTING
VR-PROJECTX

			YEAR 2022							
			STEP 4: IMPLEMENTATION							
			Month							
ID	Description	Responsible	ap 19	may 20	jun 21	jul 22	aug 23	sept 24	oct 25	nov 26
R4	4th meeting: review step 3 and preparing step 4	GUI	R4							
IO4	Implementation of the VRProjectX in e-learning platform	UPV - TAW								
TA13	Test and review of the IO 4	VDR								
QA3	Quality report	UPV								
TA14	Implementation of the test results	DYP								
TA15	Multiplier event 1	XBC								
TA16	Multiplier event 2	VDR								
TA17	Multiplier event 3	DYP								
TA18	Multiplier event 4	GUI								
R5	Final meeting	UPV							R5	
QA2	Final Report	XBC								
TA20	Dissemination	TAW								
TA21	Sustainability	XBC								

OTHER ACTIVITIES

OTHER ACTIVITIES	WHO	WHEN
MANAGEMENT INTERIM REPORT FINAL REPORT SUSTAINABILITY	XBC	Oct-2021 Oct-2022
DISEMINATION WEBSITE FLYERS, PANELS, ETC.	TAW	Jan-2021 Jan-2021
QUALITY QUALITY REPORT SURVEYS	UPV	ALWAYS

WORK PACKAGES



CENTRO INTEGRADO DE
FORMACIÓN PROFESIONAL



ID	Description
TA1	Technical coordination
R1	Kick-off meeting
TA2	Adaptation of the Project Methodology to VR
TA3	Learning outcomes review
IO1	VR-ProjectX handbook
RO	On line meeting: selection of the VRProjectX
IO2.1	Template of VR-ProjectX 1
TA8	Script and task flow for each VRProjectX.
QA1	Interim Report
TA13	Test and review of the IO 4
TA15	Multiplier event 1
QA2	Final Report
TA21	Sustainability

ID	Description
TA2	Adaptation of the Project Methodology to VR
TA3	Learning outcomes review
IO2.2	Template of VR-ProjectX 2
TA6	2D design for VR-ProjectX 1, 2, 3 and 4.
TA7	3D design for VR-ProjectX 1, 2, 3 and 4.
TA8	Script and task flow for each VRProjectX.
R3	3th meeting: review step 2 and preparing step 3
TA13	Test and review of the IO 4
TA16	Multiplier event 2

WORK PACKAGES



ID	Description
TA2	Adaptation of the Project Methodology to VR
TA9	Selection of the devices for VR Modules
TA10	Definition of the interface of the VR Modules
TA11	Programming the interface of the VR Modules
TA12	Programming VR-ProjectX 1, 2, 3 y 4
IO3.1	VR ProjectX 1
IO3.2	VR ProjectX 2
IO3.3	VR ProjectX 3
IO3.4	VR ProjectX 4
TA14	Implementation of the test results
TA17	Multiplier event 3

ID	Description
QA0	Quality Control
TA4	Selection of the e-learning platform
QA1	Quality report
TA6	2D design for VR-ProjectX 1, 2, 3 and 4.
TA7	3D design for VR-ProjectX 1, 2, 3 and 4.
IO4	Implementation of the VRProjectX in e-learning platform
QA3	Quality report
R5	Final meeting

WORK PACKAGES



ID	Description
TA4	Selection of the e-learning platform
TA5	Website of the project
R2	2nd Meeting: preparing step 2
TA6	2D design for VR-ProjectX 1, 2, 3 and 4.
TA7	3D design for VR-ProjectX 1, 2, 3 and 4.
IO4	Implementation of the VRProjectX in e-learning platform
TA20	Dissemination



Höhere Fachschule
Südostschweiz
Meine Schule. Meine Zukunft.



ID	Description
TA3	Learning outcomes review
IO2.3	Template of VR-ProjectX 3
TA8	Script and task flow for each VRProjectX.
TA13	Test and review of the IO 4

ID	Description
TA3	Learning outcomes review
IO2.4	Template of VR-ProjectX 4
TA8	Script and task flow for each VRProjectX.
R4	4th meeting: review step 3 and preparing step 4
TA18	Multiplier event 4

NEXT STEPS

ACTIVITIES

WHO

WHEN

1. HANDBOOK VR-PROJECTX'S XBC-VDR Dec
2. LEARNING OUTCOMES REVIEW: AREAS IBW-GUI Dec.
3. WEBSITE AND DISSEMINATION DOC. TAW Dec.
4. NEXT ON-LINE MEETING XBC Jan.
5. DEFINITION E-LEARNING PLATFORM UPV-TAW Jan.

**THANK YOU FOR YOUR
ATTENTION**