Digital VET

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

IO2 – Competence profile of “Experts in digital and immersive teaching for vocational training”

Project Number: 2019-1-PL01-KA202-065064
"Digital teaching in VET System – DIGITAL.VET"

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

Editors
Studio Risorse S.r.l.

Responsible Partner
Studio Risorse S.r.l.

Volume 1, February 2021
This output is a product/Intellectual Output produced in the framework of the Erasmus+ from the Project "*Digital teaching in VET System – DIGITAL.VET"* - Intellectual Output n. 2 - "Competences profile of Experts in digital and immersive teaching for vocational training", coordinated by the partner Akademia Humanistyczno-Ekonomiczna w Lodzi (Lotz, Poland).

Contact the editors:

info@studiorisorse.it

INDEX

1 INTRODUCTION: 04

1.1 Methodology and tools 06
1.1.1 Methodological Approach 06
1.1.2 Job Analysis Use 06
1.1.3 Job Analysis Oriented Methods 08
1.1.4 Tools 10
1.1.5 Procedures on the Questionnaire Administration 15
1.1.6 Sample Characterization 16
1.1.7 Metrics Questionnaire Properties (Translation Validity and Test Reliability) 27

2 FIRST SECTION: Key Activityes 30

2.1 Analysis of the Partners Charts of key activities 31
2.1.1 Charts of key activities in Italy 35
2.1.2 Charts of key activities in Poland 53
2.1.3 Charts of key activities in Slovenia 71
2.1.4 Charts of key activities in Spain 88
2.1.5 Charts of key activities in Portugal 107

2.2 General Flow Chart 126
2.2.1 Definition of a common flow chart of key activity 127

3 SECOND SECTION: Professional profile 137

3.1 Conceptual and Empirical Framework 138
3.1.1 Methodological Approach 138
3.1.2 Matrix for knowledge required associated to perform the key activities 138
3.1.3 Matrix for specific skills required associated to perform the key activities 139
3.1.4 Matrix for transversal skills required associated to perform the key 142

activities 145

4 Conclusions 147
4.1 Final Analysis Matrix Description 147
4.2 Competences profile of Experts in digital and immersive teaching for vocational training 148

5 Annex 1 : Questionnaire 163

6 Annex 2: Partners Elaboration tool 170

INTRODUCTION

This intellectual output, henceforth designated IO2, wants to describe the analysis conducted in each Partner country among the VET Trainers and Teachers on the use of digital and immersive teaching methods, with the aim to describe the key activities (unit of competence) and the teaching units that promote the correct execution of the tasks of each key activity area individuated.

It's therefore the final report describing the Job analysis of all VET Trainers and Teachers who adopts digital and immersive teaching methods, based, in part, on the partner data reports, and, on the other hand, with a new particular set of statistical tests realized by the responsible partner in the third section of this report.

But in particular, this document (IO2) will be structured into three main sections, same manner as indicated by the application form of the project approved and according to the way equally exposed by each partner.

The first part (or INTRODUCTION) will explain the purpose of profile analysis conducted; the proposed approach to be followed; the applied method of analysis, research models and tools used; as well the procedures that have been adopted by all partners and the sample characterization.

On the second part (or FIRST SECTION), it will be present the key activities of the expert professional profile, according to a flow chart describing the progression and the connections between the various labor actions that characterize the work of the expert who carries out teaching pathways based on pedagogical models such as Flipped Learning, Mobile Learning and Virtual and Augmented Reality Learning in order to develop one or more vocational competences.

Finally, on the last part (or SECOND SECTION), it will be presented the relationship maps among key activities and connected knowledge and skills, the Matrix for knowledge, specific skills and transversal skills required associated to perform the key activities and the partner profile individuated thanks to the research activity realized in all Partner countries.

At the end, it will be presented the General professional profile of the expert in digital and immersive teaching for vocational training, with the description of ideal characteristics profile.

Of course this IO2, with the IO1, ends with the completion of the entire collective effort of the partnership, reviewing all points and establish itself as the input to the *intellectual output 3 - E-learning Course and to the intellectual output 4 - iDid*

In all sections described above, in addition to the component of the statistical analysis of data to meet the demands set out in the application form of the approved project, it will always be in each of those sections, and as far as possible, expose a conceptual component, therefore, more theoretical sand in this way make the final report an element which makes it more pleasurable by read it and less burned and more easy for the understanding of the integration of obtained data.

1.1 METHODOLOGY AND TOOLS

1.1.1. Methodological Approach

The Job Analysis is a methodology that aims to collect data on the: behavior-oriented work; behavior-oriented worker; behaviors involved in interactions with machines, materials and tools, performance evaluation methods; the working environment; and, in general, staffing needs (Harvey, 1991; McCormick, Jeanneret, & Mecham, 1972).

According to Morgeson and Campion (1997, p. 627) Job Analisysis is "one of the most widely used organizational data collection techniques", but its real purpose is to contribute to other areas of Human Resources - HR (Ash & Levine, 1980).

In accordance with Fleischmann and Mumford (1991), Job Analysis are projections for a description of work behaviors and provide a basis for the HR functions. Brannick et al. (2007), claim that Job Analysis is used for everything from the creation of job descriptions and developing training to determine the effectiveness and implementation of the planning of the work force that characterizes that particular kind of work.

1.1.2. Job Analysis Use

The use of Job Analysis for HR is a avarages which serves for the development of all functions HR (Bowen, 2003; Brannick et al., 2007). These HR functions include job descriptions, job classifications, job evaluation, performance evaluation and training, and job specifications (Ash, 1988; Ash & Levine, 1980; Brannick et al., 2007, Levine et al., 1988). Benge (1940), says that while there are not enough details in the Job Analysis, it can be used for a wide variety of functions in HR, including merit assessments, selection, training, incentive pay, improved working conditions, improve working methods, "trace" or describe the lines of responsibility, job functions and promotion lines. In order to understand the impact that the Job Analysis has in the workplace, a brief review of the Job Analysis is used in the following point below an explanatory summary

Creating job descriptions is the most common use by the Job Analysis (Brannick et al., 2007). Typically, job descriptions are made by compiling the most salient information gather by the Job Analysis. Job descriptions are intended primarily to summarize the analysis of the work of the results and highlight the most important elements of the work. According to Schwind et al (2013), job descriptions, generally, follows the same style, but between organizations, there are different ways and also contents may diversify. A simple approach is to write a narrative description that covers the work in a few paragraphs.

When recruiting and selecting candidates, employers use the Job Analysis to determine what knowledge, skills and abilities that a candidate needs to do the job (Brannick et al., 2007).

These requirements are referred to as job specifications, or "written description of job requirements" (Brannick et al., 2007, p. 220).

Job specification may include job requirements, such as written communication skills or previous experience in a particular field. Job specifications allow companies to determine the professional certification and the education requirements for a person to perform a particular type of work. Prien and Hughes (2004) showed that the minimum qualifications, such as education requirements may be established by using a quantification of the Job Analysis designed to measure the level of education required to perform a given task. The study of Prien and Hughes (2004), tells us the relation of necessary knowledge binds with educational or training levels.

The Job Analysis makes it possible for employers to determine what tests can be used to select or promote. Jones et al. (2001) say that when looking for the knowledge, skills, abilities, and other characteristics (eg personality traits) are individual characteristics relatively stable and that should be what employers should through them, screen applicants in using tests of selection. For exemple, these can be features such as mechanical ability and selective attention.

The Job Analysis is used to determine which are the knowledge, skills and abilities (KSA's) necessary and thus these KSA that are relatively stable and can not easily be "trained" and as such are selected as the criteria that a tool selection should be displayed for the characterization. Professional Human Resources (HR) can then design or purchase a selection instrument that measures such stable KSA's.

But briefly, and according to Schwind et al (2013), the job specification describes the requirements of the work of the employees who do that requirements and the human factors that are needed. It is a profile of human characteristics needed for the job. These requirements include experience, training, education, physical demands and mental demands. Also according to the words of the authors, should include specific tools, actions, experiences, education, and training.

The difference between a job description and a job specification lies in the following: a description of the work defines what work is; It is a job profile. While the job specification describes the work requirements demand to employees who do such work and the human factors that are needed. It is the profile of human characteristics required for that particular job. Here fall the requirements include experience, training, education, physical demands and mental demands.

Job evaluations are conducted studies to determine the value of a particular job, and they are used to set the base salary to ensure equity in remuneration (Brannick et al., 2007, Hahn & Dipboye, 1988; Schwab & Heneman, 1986). Levine et al. (1988) analyzed nine corporations that were exemplary in the use of Job Analysis. Of the nine corporations, eight performed Job Analysis with the intent to use analysis for job evaluation or to determine compensation. Job

evaluations can also be made from information provided in a job description (Brannick et al 2007; Hahn & Dipboye, 1988).

Job evaluations are conducted by having analysts evaluate information found in the job description, analysis of work, or the evaluation of working components (Brannick et al., 2007). The classifications can be made by examining remuneration factors (i.e., job attributes) through the work analysis as a whole, or by examining a job compared to other comparable work (Brannick et al., 2007).

Job evaluations allow to examine what types of tasks are completed as part of the work and what knowledge, skills and abilities are needed to perform that work. Job analysts and thereby can determine how complex the job is, to what extent the work is complex, and the relative value of that work is being performed. When using the Job Analysis for many functions, including reviews of work, organizations are able to be more efficient in their HR functions.

The Job Analysis can also be used to determine the training objectives for a job (Brannick et al., 2007). Job Analysis with regard to training refers mainly to curriculum development and assessment of needs (Levine et al., 1988).

The Job Analysis tells the professional or HR trainer that a certain employed in the exercise of their functions will need to, after training, be able to perform a set of core key tasks for the good performance of its activity (Brannick et al., 2007; Ford & Goldstein, 2002).

By showing what the employee needs to know to perform a certain job, the HR professional can therefore determine what knowledge or skills need to be "trained" in training. Using Job Analysis to develop a training program, organizations can find out what "*needs are better assessed, courses are more job-related, and more of the appropriate population is reached*" (Levine et al., 1988, p. 17).

Jones et al. (2001) suggest that the Job Analysis should say what are the KSA's necessary for someone who performs a particular job. As discussed above, determine the knowledge and skills that can be easily taught and that are very specific to a particular job that should be included in training, while more stable individual characteristics, such as mechanical and cognitive skills that should be the basis for the candidate selection.

1.1.3. Job Analysis Oriented Methods

Several types of Job Analysis has been used and discussed, by making it important to address different types or methods of Job Analysis.

There are three general methods of Job Analysis, specifically targeted or oriented to the job, oriented to the worker, and the hybrid, a mixing of the other two (Brannick et al., 2007). The method used for the Job Analysis should be determined by the purpose of job analysis itself

(Brannick et al., 2007). Choosing the right method, should therefore take into account the purpose of the Job Analysis, because the method used makes a significant difference in the results obtained on Job Analysis (Cornelius, Carron, & Collins, 1979).

Cornelius et al. (1979) show us that the type of Job Analysis is crucial and will be strongly influenced the results inherent to this selection. Job classification involves the category of work that a particular job fits; for example a plumber and park maintenance worker would have something in common that would both fit in the overall standings worker, while a desk and a data entry clerk would be classified as clerical. This suggests that not only the number of job categories, but also the type of job categories is different depending on the type of Job Analysis was used to.

Methods of Job Analysis oriented work, focus mainly on what the worker does as part of his work (Brannick et al., 2007). In some research these methods are referred to as methods task-oriented (Cornelius et al, 1979; Lopez, Kesselman, and Lopez, 1981; Prien & Ronan, 1971) because they refer to any method that analyzes the types of tasks completed by someone at work, as well as the tools and equipment used to do so (Brannick et al., 2007). The task analysis is performed by evaluators to predict a list of activities that are performed as part of a particular job (Brannick et al., 2007). These evaluators will then indicate their observations through the working position, such as the frequency with which the activity is performed, how difficult the task is, or how important the task is the overall work. This tells the HR professionals how that performing the Job Analysis is critical to each activity (or task) that are performed in a particular job.

Methods of Job Analysis oriented to the workers involves the analysis of attributes required by workers to perform a specific job (Brannick et al, 2007;. Harvey Friedman, Hagel, and Cornelius, 1988). Its main focus is on knowledge, skills, abilities and other characteristics that an employee must have in order to carry out their work (KSA's required).

According to Harvey, "*the worker-oriented approach to job analysis is one of the most useful methods of work descriptions yet developed*".

The Job Analysis method oriented to the worker is often used for the selection process, in which they analyze the KSA's specific to a particular job requires the employee (Brannick et al., 2007). In other words, describe the requirements that one person need to complete certain type of tasks and responsibilities of that particular job (Dierdorff & Wilson, 2007).

Here, the Position Analysis Questionnaire (PAQ) is one of the most widely recognized tools for the job analysis oriented worker and was one of the first methods of analysis used to quantify the job analysis data, designed to be applied to jobs and organizations (McCormick et al., 1972). Later, Cornelius and Hackel (1978) developed the Inventory Element Job. This instrument has a lower reading level than the PAQ, but still measure the same factors PAQ (Harvey et al., 1988).

According to Brannick et al. (2007), the oriented methods for workers are the most suitable if used as a selection tool.

1.1.4. Tools

In order to carry out the Job analysis, and obtained the desired IO2 results, the partnership chosen to use the **Hybrid Analysis Method**. This method uses elements of, Work Oriented Analysis Method and Worker Oriented Analysis Method.

O*NET (Occupational Information Network) is an excellent example of a hybrid method of Analysis (Brannick et al., 2007). Information on O*NET includes which demands that require their employees to take up that particular job, for example, education, experience, and what KSA's, but also information about the work that is done and the context in which it is accomplished. Thanks to this questions, it also possible to understand the training level of the Practitioner, practitioner and, according to each skills, to identify his training needs.

Specifically, the hybrid method has a greater number of variables to the one that is oriented to the worker, i.e., the oriented focus lies in the knowledge, skills, abilities and other characteristics that an Practitioner / practitioner must have in order to carry out his work (KSA's required) and the training level that he must have.

However, according to Schwind et al (2013), there is no best way to collect the information of the Analysis. According to his words, it is up to analysis the duty to assess the optimal trade-offs between time, cost and accuracy associated with each method, since it is up to these decide which trade-offs are more suitable, they can choose to selected the best type of data collection method, which can be:

a) interviews;

b) questionnaires;

c) observation as a method;

d) logbooks employee;

e) a combination of these techniques.

In other words, taking into account the time available to achieve this output, associated costs and ensure a certain quality to the required results, we used a **questionnaire created as a Method of Data Collection for this IO2**, and in a way can be quantified and validated by all partners (as a specific tool for the purpose formulated also unique, singular and specific) that contains some level of supervision addressed issues, and a set of descriptive variables for a better characterization of the total sample.

Moreover, the need for the utilization of statistics as a resource and a method for obtaining the desired results through the created tool (questionnaire), which will later describe in more detail, it was assume by all partners as the best efficient way according to the relationship between the quality, results and associated costs of IO2.

According to Smith (2015), many people consider the statistical analysis as a purely technical exercise related to the application of techniques of collection and analysis of specialized data, however, this perception is incorrect and deceitful. The practice of statistics as a scientific method involves contingent procedures and making shared decision, and not only the mechanical application of formulas accepted as is sometimes assumed (McGinn, 2010). It's for this reason that for Bhattacherjee (2012), scientific method refers to a standardized set of techniques that enable the construction of scientific knowledge such as how to make valid observations considered how to interpret the results and to generalize these results.

Since this IO2 has a specific purpose that was already been mentioned, the need to create a tool to this end, it is urgent the use of statistics as the scientific method for, not only answer what is require in the IO2, but also in further be possible to other researchers used the tool and by this way be able, according to Bhattacherjee (2012), to obtain the:

- ✓ Replicability of results, ie, enable other researchers independently replicate or repeat the scientific study and get similar results;
- ✓ Accuracy of the data, which are often difficult to measure;
- ✓ And Parsimony. When there are several possible explanations for the same phenomenon, researchers must always accept the simpler or more logical economic explanation. This concept is called parsimony or "Occam's razor". The parsimony prevents that there is an infinite number of concepts and relationships that can explain a little bit of everything but nothing in particular.

On the other hand, and according to Furr (2011), construction of a questionnaire requires attention to the proposed psychometric properties of the items that make up the whole questionnaire. It is for this reason that psychometrics as a specific branch of statistics, is based on measure theory in science to explain the sense that they have the answers of the subject to a series of tasks (Pasquali, 2008).

Therefore, it is urgent, of course, and before answering any question in particular required in this IO2, analyze some Metrics Questionnaire Properties to ensure the quality of data, its properties or basic indicators that guarantee the quality of the tool / questionnaire administered.

So for that, we proposed in consideration of the following metric indicators:

- Translation validity (proposed here in face validity);
- Reability of the data (analyzed through internal consistency - alpha coefficient).

However, and before the analysis of the metric indicators indicated above, as well the description of the tool used for the purpose of this IO2, we leave here exposed on the following table (Table 1), an informative summary on the fundamental characteristics on which will be held this output.

Table 1. Information summary about the fundamental characteristics for IO2 achievement

SUMMARY OF INFORMATION ON THE MAIN CHARACTERISTICS FOR CARRYING OUT THE IO2	
Purpose profile analysis of the expert	Description of key activities of expert in digital and immersive teaching for votational training (unit of competence) and teaching units that promote the correct execution of the tasks of the each key activity area individuated.
Methodological approach or model used for this Output	Job Analysis
Job Type Analysis method used (tool)	Questionnaire
Method of orientation followed	Hybrid
Data Analysis Method	Statistics (quantitative and qualitative) - and use of psychometry
Tool Management Method	Different Method (one to one interviews, focus groups, on line surveys, etc...)

The tool used here for purposes of Job Analysis for IO2 (which is attached – Annex 1) is based on a questionnaire created by the responsible partner and operates the following main categories or sections detailed in the following table (Table 2).

Concerning the questionnaire, we have to underline that the partnership decided to submit to involved Practitioners only one questionnaire both for the Training Need Analysis and the Job Analysis. This decision have been shared among all Partners in order to make easies the realization of the survey.

In the following table, we indicate the description of the whole questionnaire.

Table 2. Questionnaire For the analysis of Competence profile and training need of the expert in digital and immersive teaching for vocational training.

SECTION	TRAINING NEED ANALYSIS	JOB ANALYSIS
SECTION A Practitioner Position Identification	X	X
SECTION B Key Activities Required		X
SECTION C Knowledge	X	X
SECTION D Specific Skills	X	X
SECTION E Transversal Skills (Attitudes and Behaviors)	X	X
SECTION F Equipemments, tools and materials used in daily work		X
SECTION G Outputs and Results Associated with your Key-Activities (tangible and intangible)		X
SECTION H Organizational Supervision		X

Generally speaking, 1 introduction and 8 sections have been created. The introduction provides then a reading a set of clear guidelines for completing the questionnaire.

Section A has been created with the aim to collect data about the **job position** of interviewed people, in order to identify the sample of the survey.

Section B refers the **Key Activities Required**, with the indication of importance level and difficulty level associated

Section C refers the analysis of **Knowledge** required to the Practitioners, with the indication of importance level, difficulty level and training need level associated.

Section D refers the analysis of **Specific Skills** required to the Practitioners, with the indication of importance level, difficulty level and training need level associated.

Section E refers the analysis of **Transversal Skills** required to the Practitioners, with the indication of importance level, difficulty level and training need level associated.

Section F refers the description of equipment, tools and materials used in daily work.

Section G refers the description of Outputs and Results Associated with the indicated Key-Activities and, finally, Section H refers the presence of a supervisor.

In the following table (Table 3), we show the distribution of the sections which make up the questionnaire created for the purpose of this IO2, depending on the method followed orientation and subsequent type of data to be analyzed in terms of the statistical point of view.

Table 3. Questionnaire_Sections

Method Orientation	Questionnaire Components	Questionnaire Sections	Brief description of the sections	Type of analysis data
Hybrid method	Job Analysis	Section A	Position Identification	Qualitative
		Section B	Key Activities Required	Quantitative
		Section C	Knowledge	Quantitative
		Section D	Specific Skills	Quantitative
		Section E	Transversal Skills	Quantitative
		Section F	Equipment, tools and materials used	Qualitative
		Section G	Outputs and Results Associated with your Key-Activities	Qualitative
		Section H	Organizational Supervision	Qualitative
	Training needs analysis	Section C	Knowledge	Quantitative
		Section D	Specific Skills	Quantitative
		Section E	Transversal Skills	Quantitative

1.1.5 Procedures on the Questionnaire Administration

According to the presentation of the instruments / tools to be used in carrying out the IO2, it was established the procedures to be implemented the administration of questionnaire by each partner (Annex 1, the final version).

For further clarification, all partners follow the same rules and the same procedures for obtaining a final product, shared the questions and the items that have to be inserted in the questionnaire.

Finally, the partners agreed to perform the following steps divided into two distinct phases:

- operative phase;
- compilation phase of the information obtained.

OPERATIVE PHASE

I. Completion of Annex A (Questionnaire) using the focus groups of practitioners - or the on line surveys software (tool in the version of their mother tongue) or email, with at least 30 VET teachers and trainers and/or expert in digital and immersive teaching.

COMPILATION PHASE

I. All partners should carry out their final report based on the information collected during the survey and inserted in a common excel file template (Elaboration tool) created by the responsible Partner for IO2 for this purpose;

II. The Elaboration tool of each partner in relation to the administration of the Annex 1, should be performed in excel file and should be delivered to the partner responsible for IO2 in electronic format and in English, containing the following filled section:

- SECTION A. Practitioner Position Identification
- SECTION B. Key Activities Required
- SECTION C. Knowledge
- SECTION D. Specific Skills
- SECTION E. Transversal Skills (Attitudes and Behaviors)
- SECTION F. Equipment, tools and materials used
- SECTION G. Outputs and Results Associated with your Key-Activities
- SECTION H. Organizational Supervision

It is based on the description of the procedures used for the results elaboration, that we will expose in the Second Section of this report. However, first, we characterize the partner sample of this IO2 and followed by the results of the metrics questionnaire properties.

1.1.6 Sample Characterization

For better characterization of what is being exposed in the following table (Table 4), we present the variables of the items that make up the sections to be analyzed here.

Table 4. Number of variables to be analyzed on the sample characterization by each partner

Questionnaire Sections	Description of the sections	Number of items of each section
Section B	Position Identification	5

In the second section of this report, it will be presented the sample involved in the survey in each Partner country, with the description of all information concerning:

- their current position
- their Level of studies
- their Length of Time using digital and immersive teaching
- the numbers of hours per week they work with students
- their relevant trainings in the field of digital and immersive teaching

In the following tables, we summarize the samples of Practitioners involved in each Partner Country.

Italian Sample

Position	Valid Percent
Teacher	80,00%
Trainers	13,33%
Entrepreuner/Practitioner	6,67%
Total	**100%**

Level of studies	Valid Percent
University I level Degree	20,00%
University Specialistic Degree	80,00%
Total	**100%**

Lenght of Time	Valid Percent
6 months	6,67%
8 months	3,33%
10 months	10,00%
1 years	46,67%
1 year 6 months	3,33%
1 year 8 months	3,33%
2 years	20,00%
3 years	6,67%
Total	**100%**

Hours per week	Valid Percent
2	3,33%
12	3,33%
15	3,33%
18	6,67%
20	16,67%
22	20,00%
24	13,33%
28	6,67%
30	20,00%
40	3,33%
variable data based on the type of course	3,33%
Total	**100%**

Trainings	Valid Percent
YES	40,00%
NO	60,00%
Total	**100%**

Concerning the description of sample involved in Italian survey, the most important information can be summarized as follow:

- The total number of practitioners inolved in the survey are **30**. They gave answer to all items, so in the following table we never will find missing answers.
- Concerning the job position, a lot of involved Practitioners are **Teachers** (80,00%).
- Concerning the Lenght of Time using digital and immersive teaching, the involved teachers declare that they are using digital and immersive teaching from 6 months to 3 years, but the most part of them are using digital and immersive teaching from **1 years** (46,67%).
- Concerning the weekly time spent working with students, the most part of involved Practitioners works **22 or 30 hours per week** with students (20,00%), so it averages that they spend half part or full part of all their working time with students.
- Finally, almost all of involved practitioners declared that **they didn't trainings** in the field of digital and immersive teaching (60,00%). If we read their answers, we notice that they especially attended on line training courses and webinar.

Polish Sample

Position	Valid Percent
Educator	6,66%
Teacher	56,67%
Project Coordinator	6,67%
Career counselor	26,67%
Trainer	3,33%
Total	**100%**

Level of studies	Valid Percent
EQF3	33,33%
EQF4	66,67%
Total	**100%**

Lenght of Time	Valid Percent
0	3,33%
1	10,00 %
2	16,67 %
3	3,33%
4	10,00 %
5	20,00%
6	6,67%
7	6,67 %
8	16,67 %
10	3,33%
15	3,33%
Total	**100%**

Hours per week	Valid Percent
4	6,67%
5	13,33%
6	16,67%
7	6,68%
8	10,00%
10	16,67%
11	3,33%
19	3,33%
20	3,33%
25	3,33%
27	3,33%
40	13,33%
Total	**100%**

Trainings	Valid Percent
YES	23,33%
NO	76,67%
Total	**100%**

Concerning the description of sample involved in Polish survey, the most important information can be summarized as follow:

- The total number of practitioners inolved in the survey are **30**.
- Concerning the job position, a lot of involved practitioners are **Teachers** (56,67%) and **Career counsellors** (26,67%)
- Concerning the Lenght of Time using digital and immersive teaching, the involved teachers declare that they are using digital and immersive teaching from 0 to 15 years, but the most part of them are using digital and immersive teaching from **5 years** (20,00%), 2 years (16,67%) and 8 years (16,67%)
- Concerning the weekly time spent working with students, the most part of involved Practitioners works **6 or 10 hours per week** with students (16,67%), **5 or 40 hours per week** with students (13,33%)
- Finally, almost all of involved practitioners declared that **they didn't trainings** in the field of digital and immersive teaching (76,67%). If we read the responses of those who claimed to have done training, we notice that they especially attended training concerning **methodology of e-learning** and **new technology in education.**

Slovenian Sample

Position	Valid Percent
Teacher	96,00%
Counselor	4,00%
Total	**100%**

Level of studies	Valid Percent
EQF1	80,00%
EQF2	12,00%
EQF3	8,00%
Total	**100%**

Lenght of Time	Valid Percent
1 years	24,00%
3 years	4,00%
5 years	12,00%
6 years	4,00%
7 years	4,00%
8 years	4,00%
10 years	16,00%
12 years	4,00%
15 years	8,00%
17 years	8,00%
18 years	8,00%
20 years	4,00%
Total	**100%**

Hours per week	Valid Percent
0	4,00%
5	4,00%
7	4,00%
15	8,00%
20	16,00%
21	20,00%
22	4,00%
23	8,00%
25	12,00%
26	12,00%
27	4,00%
28	4,00%
Total	**100%**

Trainings	Valid Percent
YES	48,00%
NO	52,00%
Total	**100%**

Concerning the description of sample involved in Slovenian survey, the most important information can be summarized as follow:

- The total number of practitioners inolved in the survey are **25**.
- Concerning the job position, a lot of involved practitioners are **Teachers** (96,00%)
- Concerning the Lenght of Time using digital and immersive teaching, the involved teachers declare that they are using digital and immersive teaching from 0 to 20 years, but the most part of them are using digital and immersive teaching from **1 year** (24,00%), **10 years** (16,00%) and **5 years** (12,00%)
- Concerning the weekly time spent working with students, the most part of involved Practitioners works **21** (20,00%), **or 20 hours per week** with students (16,00%), **25 or 26 hours per week** with students (12,00%), so it averages that they spend full part of all their working time with students.
- Finally, just over half of involved practitioners declared that **they didn't trainings** in the field of digital and immersive teaching (52,00%). If we read the responses of those who claimed to have done training, we notice that they especially attended training concerning **Moodle, Teams** and **other online tools.**

Spanish Sample

Position	Valid Percent
Trainers	60,00%
Teacher	40,00%
Total	**100%**

Level of studies	Valid Percent
EQF1	70,00%
EQF2	30,00%
Total	**100%**

Lenght of Time	Valid Percent
1 year	63,34%
2 years	6,67%
3 years	3,33%
4 years	10,00%
5 years	6,67%
7 years	3,33%
9 years	3,33%
10 years	3,33%
Total	**100%**

Hours per week	Valid Percent
2	3,33%
3	6,67%
4	10,00%
5	6,67%
8	20,00%
10	10,00%
11	3,33%
12	6,67%
14	3,33%
20	13,33%
25	13,33%
40	3,34%
Total	**100%**

Trainings	Valid Percent
YES	20,00%
NO	80,00%
Total	**100%**

Concerning the description of sample involved in Spanish survey, the most important information can be summarized as follow:

- The total number of practitioners inolved in the survey are **30**.
- Concerning the job position, all of involved practitioners are **Trainers** (60%) and **Teachers** (40,00%)
- Concerning the Lenght of Time using digital and immersive teaching, the involved teachers declare that they are using digital and immersive teaching from 0 to 10 years, but the most part of them are using digital and immersive teaching from **1 year** (63,34%)
- Concerning the weekly time spent working with students, the most part of involved Practitioners works **8 hours per week** with students (20,00%), **20 or 25 hours per week** with students (13,33%), so it averages that they spend half part or full part of all their working time with students.
- Finally, almost all of involved teachers declared that **they didn't trainings** in the field of digital and immersive teaching (80,00%). If we read the responses of those who claimed to have done training, we notice that they especially attended training concerning **e-learning** and **online training.**

Portuguese Sample

Position	Valid Percent
Teachers	56,67%
Trainers	43,33%
Total	**100%**

Level of studies	Valid Percent
EQF1	56,67%
EQF2	30,00%
EQF3	13,33%
Total	**100%**

Lenght of Time	Valid Percent
1 year	56,67%
2 years	13,33%
3 years	3,33%
5 years	13,33%
10 years	10,00%
11 years	3,34%
Total	**100%**

Hours per week	Valid Percent
0	3,33%
2	13,34%
3	6,67%
4	3,33%
6	3,33%
7	3,33%
8	10,00%
10	13,34%
12	6,67%
15	6,67%
16	3,33%
20	3,33%
22	3,33%
25	3,33%
30	6,67%
35	6,67%
36	3,33%
Total	**100%**

Trainings	Valid Percent
NO	70,00%
YES	30,00%
Total	**100%**

Concerning the description of sample involved in Portuguese survey, the most important information can be summarized as follow:

- The total number of practitioners inolved in the survey are **30**.
- Concerning the job position, all of involved practitioners are **Trainers** (43,33%) and **Teachers** (56,67%)
- Concerning the Lenght of Time using digital and immersive teaching, the involved teachers declare that they are using digital and immersive teaching from 1 to 11 years, but the most part of them are using digital and immersive teaching from **1 year** (56,67%)
- Concerning the weekly time spent working with students, the most part of involved Practitioners works **2 or 10 hours per week** with students (26,68%), **8 hours per week** with students (10,00%)
- Finally, almost all of involved teachers declared that **they didn't trainings** in the field of digital and immersive teaching (70,00%). If we read the responses of those who claimed to have done training, we notice that they especially attended training concerning **Teams**, **other online tools** and **online training.**

1.1.7 Metrics Questionnaire Properties (Translation Validity and Test Reliability)

At this point, we analyze the following indicators:

- Translation Validity
- Data Reliability

Translation Validity

During the presentation of the questionnaire, created for the purpose of this IO2, all partners were invited to conduct a deep review item by item, section to section, until we get a final version accepted by all and minimally understandable to the translation of the same in the respective mother tongues of each partner.

As an additional and obligatory procedure, each partner was responsible for translating the questionnaire in their mother tongue, and choose the best way to submit them to its national practitioners.

Data Reliability

At this point, for a better understanding of what is being observed, we exposed in the following table, which are the variables of the items that make up the sections that will be analyzed, ie, for the data reliability.

Questionnaire Sections	Brief description of the sections	Number of items of each section	1st variable to be submitted to factor analysis	2nd variable to be submitted to factor analysis	3rd variable to be submitted to factor analysis
B	Key Activities Required	10 + 1 (optional)	Importance Level associated	Difficulty Level associated	/
C	Knowledge	11 + 3 (optional)	Importance Level associated	Difficulty Level associated	Training need Level associated
D	Specific Skills	13 + 3 (optional)	Importance Level associated	Difficulty Level associated	Training need Level associated

E	Transversal Skills	12 + 3 (optional)	Importance Level associated	Difficulty Level associated	Training need Level associated
F	Equipment, tools and materials used	5 + 5 (optional)	Yes	No	
G	Output and results associated with your Key activities	4 + 6 (optional)	Yes	No	
H	Organizational supervision	1	Yes	No	

Through the exposition of this table, we propose the data obtained using the formula expressed below, in which is representative of the **weight of each item** that make up the respective sections and has or contributes to the total score in the respective section.

Then, we have:

- The weight realized for each **Key Activity** (WpKA), by the following formula:

WpKA = Importance Level associated X Difficulty Level associated

- The weight realized for each **Knowledge Required** (WpKnR), by the following formula:

WpKnR = Importance Level associated X Difficulty Level associated

- The weight realized for each **Specific Skill Required** (WpSSR), by the following formula:

WpSSR = Importance Level associated X Difficulty Level associated

- The weight realized for each **Transversal Skill Required** (WpTSR), by the following formula:

WpTSR = Importance Level associated X Difficulty Level associated

In global perspective, it is an interesting system of scoring allocation from a statistical point of view, because it allows us to:

1. Obtain an individual final score with a wider range;
2. Evaluate the reliability analysis of the obtained data by each partner;
3. Evaluate the dimensionality of the items that make up the questionnaire by each partner.

This last point allows us to check the assumption of the one-dimensionality that implies that all the items of an instrument is related to only a single cluster or more than one that make up the individuals total score (Pestana & Gageiro, 2014; Hutz, Bandeira & Trentini, 2015).

FIRST SECTION

Key Activities

2.1 ANALYSIS OF THE PARTNERS CHARTS OF KEY ACTIVITIES

In this section, we present the results obtained by each partner thanks to their national surveys conducted among national VET Trainers and Teachers using digital and immersive teaching methods. In particular way, we will present the data elaboration concerning the **Section B, C, D, E, F, G and H** of the used questionnaire and, concerning the Section B, C, D and E, we will focus our attention on the part of the questionnaire connected to the values that all interviewed practitioners gave to the coloumns "**Importance Level associated**" and "**Difficulty Level associated**".

In order to produce the following charts, each partner used the same elaboration tool, created by the responsible partner according to the section of questionnaire. So, for each partner, we present several Flow charts, and each one refers a different section of the questionnaire:

- **SECTION B - Key Activities**: for each Key activity foreseen in the questionnaire, we will present:
  - The **chart** concerning the Avarage of results obtained by considering the **Importance Level of each Key Activity (B_IL),** where we will highlight with a red border the first 3 key activities for importance according to the opinion of involved practitioners;
  - The **chart** concerning the Avarage of results obtained by considering the **Difficulty Level of each Key Activity (B_DL),** where we will highlight with a red border the first 3 key activities for difficulty according to the opinion of involved practitioners;
  - The **Chart** concerning the **weight realized for each Key Activity (WpKA**), where we will present all foreseen Key Activities from the most "relevant" to the less one, according to the opinion of involved operators

- **SECTION C - Knowledge**: for each Knowledge foreseen in the questionnaire, we will present:
  - The **chart** concerning the Avarage of results obtained by considering the **Importance Level of each Knowledge (C_IL),** where we will highlight with a

red border the first 3 Knowledge for importance according to the opinion of involved practitioners;

- The **chart** concerning the Avarage of results obtained by considering the **Difficulty Level of each Knowledge (C_DL),** where we will highlight with a red border the first 3 Knowledge for difficulty according to the opinion of involved practitioners;
- The **chart** concerning the **weight realized for each Knowledge (WpKnR**), where we will present all foreseen Knowledge from the most " relevant" to the less one, according to the opinion of involved operators

- **SECTION D - Specific Skills**: for each Specific Skills foreseen in the questionnaire, we will present:
  - The **chart** concerning the Avarage of results obtained by considering the **Importance Level of each Specific Skills (D_IL),** where we will highlight with a red edges the first 3 Specific Skills for importance according to the opinion of involved practitioners;
  - The **chart** concerning the Avarage of results obtained by considering the **Difficulty Level of each Specific Skills (D_DL),** where we will highlight with a red border the first 3 Specific Skills for difficulty according to the opinion of involved practitioners;
  - The **chart** concerning the **weight realized for each Specific Skills (WpSSR**), where we will present all foreseen Specific Skills from the most " relevant" to the less one, according to the opinion of involved operators

- **SECTION E - Transversal Skills (Attitudes and Behaviors)**: for each Transversal Skills foreseen in the questionnaire, we will present:
  - The **chart** concerning the Avarage of results obtained by considering the **Importance Level of each Transversal Skills (E_IL),** where we will highlight with a red edges the first 3 Transversal Skills for importance according to the opinion of involved practitioners;
  - The **chart** concerning the Avarage of results obtained by considering the **Difficulty Level of each Transversal Skills (E_DL),** where we will highlight

with a red edges the first 3 Transversal Skills for difficulty according to the opinion of involved practitioners;

- The **chart** concerning the **weight realized for each Transversal Skills (WpTSR)**, where we will present all foreseen Transversal Skills from the most " relevant " to the less one, according to the opinion of involved operators

- **SECTION F – Equipment, tools and materials used:** for each equipment, tool and material foreseen in the questionnare, we will present the results by considering the **Frequency** of each answer (expressed in **numbers and percents**[1]). Then, we highlight with red edges the most important results obtained (**highest Frequency**).

- **SECTION G - Outputs and Results associated with your Key-Activities**: for each output foreseen in the questionnare, we will present the results by considering the **Frequency** of each answer (expressed in **numbers and percents**). Then, we highlight with red edges the most important results obtained (**highest Frequency**).

- **SECTION H - Organizational Supervision**: for each given anwer, we will present the results by considering the **Frequency** of each answer (expressed in **numbers and percents**). Then, we highlight with red edges the most important results obtained (**highest Frequency**).

In the second part of this report we will compare the results obtained in all Partner countries in order to define a common data about the **professional profile** of experts in digital and immersive teaching for vocational training.
Finally, we have to precise that the charts that we will have been elaborated according to the elaboration tool filled by each Partner, that represent the ***Annex 2*** of this report.

[1] *Concerning the results expressed in "percent", we also precised the "valid percent", that is the real percent of result obtained by a specific item, without considering the missing answers.*

Before the presentation of national reports, we have to precise that the number of involved practitioners in the survey is lower than foreseen. In fact, the partnership involved in the survey more than 150 Practitioners (30 per involved country), but not all of them sent their feedback. In particular, the number of involved Practitioner per country is the following:

Country	N. of involved Practitioners	n. of received feedback
Italy	30	30
Poland	30	30
Slovenia	30	25
Spain	30	30
Portugal	30	30
Tot.	**150**	**145**

2.1.1 Charts of key activities in Italy

Section B - Key Activities

Avarage Importance Level (B_IL)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	3,47	2	5
Definition of objectives to be achieved for students	30	3,63	2	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	3,6	2	5
Selection of tools and devices needed for digital and immersive teaching	30	4,4	3	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	2,87	1	5
Involve students in the learning process	30	4,2	2	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,8	2	5
Monitoring, verification and evaluation of the results achieved by students	30	3,5	1	5
Drafting final evaluation of students	30	3,3	2	5
Information and involvement of parents	30	2,8	1	5

Avarage Difficulty Level (B_DL)

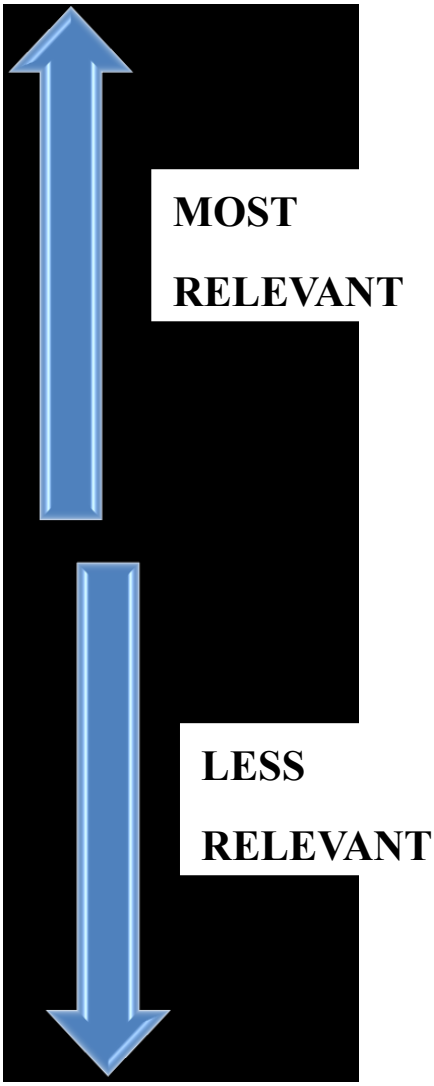
Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	3,2	2	5
Definition of objectives to be achieved for students	30	3,33	2	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	3,33	2	5
Selection of tools and devices needed for digital and immersive teaching	30	4,4	3	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	2,7	1	5
Involve students in the learning process	30	4,2	2	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,6	2	5
Monitoring, verification and evaluation of the results achieved by students	30	3,3	1	5
Drafting final evaluation of students	30	3	2	5
Information and involvement of parents	30	2,8	1	5

Chart of Weight per Key Activity (WpKA)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	WpKA
Selection of tools and devices needed for digital and immersive teaching	19,36
Involve students in the learning process	17,64
Organization and implementation of targeted activities and pathways, management of learning progression	13,68
Definition of objectives to be achieved for students	12,09
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	11,99
Monitoring, verification and evaluation of the results achieved by students	11,55
Definition of the studies program and of the educational path of the students: needs analysis	11,10
Drafting final evaluation of students	9,9
Information and involvement of parents	7,84
Transfer of know-how to students for the correct use of digital and immersive learning tools	7,75



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	4,47	4	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	4,1	2	5
Knowledge of digital tools useful for the use of these technologies	30	4,63	3	5
Knowledge of the techniques used for digital teaching	30	4,67	3	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	4,33	3	5
Knowledge of teaching subjects (disciplinary knowledge)	30	4,27	3	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,9	3	5
Knowledge of foreign languages (at least English language)	30	2,83	1	5
Knowledge of innovative learning environments	30	4,43	3	5
Cognitive and coordination, design and management knowledges	30	3,5	3	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the	30	3,83	2	5

educational intervention				

Avarage Difficulty Level (C_DL)

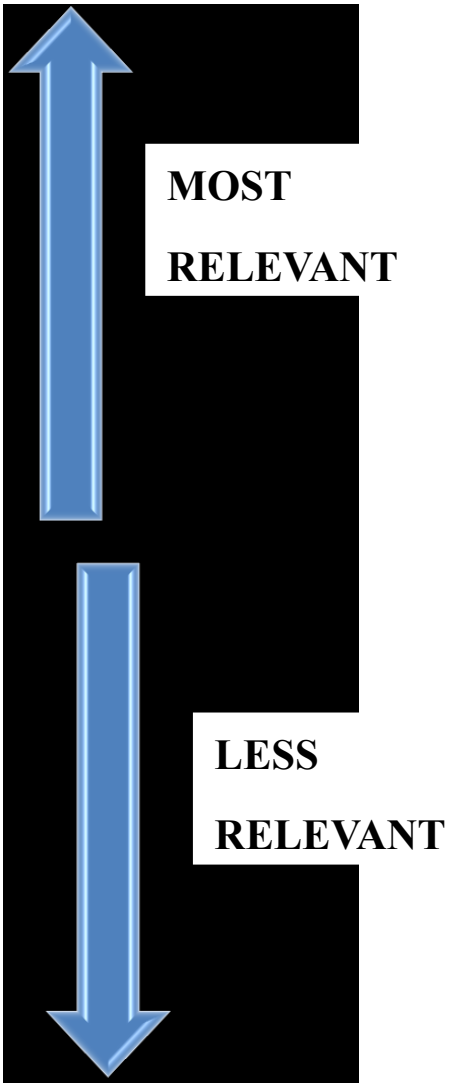
Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	4,53	3	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	4,47	3	5
Knowledge of digital tools useful for the use of these technologies	30	4,53	3	5
Knowledge of the techniques used for digital teaching	30	4,53	3	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	4,37	3	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,4	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,53	1	5
Knowledge of foreign languages (at least English language)	30	2,8	1	5
Knowledge of innovative learning environments	30	4,27	3	5
Cognitive and coordination, design and management knowledges	30	3,2	2	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,2	2	5

Chart of Weight per Knowledge Required (WpKnR)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	WpKnR
Knowledge of the techniques used for digital teaching	21,16
Knowledge of digital tools useful for the use of these technologies	20,97
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	20,25
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	18,92
Knowledge of innovative learning environments	18,92
Knowledge of cardboard and viewers, their use and the difference between these tools	18,33
Knowledge of teaching subjects (disciplinary knowledge)	14,52
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	13,77
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	12,26
Cognitive and coordination, design and management knowledges	11,2
Knowledge of foreign languages (at least English language)	7,92



Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	2,83	1	5
Information finding and analysis skills	30	2,86	1	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	4,13	3	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	3,97	3	5
ICT and all new technologies skills	30	4,63	3	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	4,4	3	5
Ability to create and print Marker	30	3,9	3	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	4,6	3	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	4	2	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	4,13	3	5
Management skills of the discipline and communication within the virtual classrooms	30	4,3	3	5
Pedagogical skills	30	3,83	3	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational	30	4,13	3	5

relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)				

Avarage Difficulty Level (D_DL)

Valid cases = 30; cases with missing value(s) = 0.

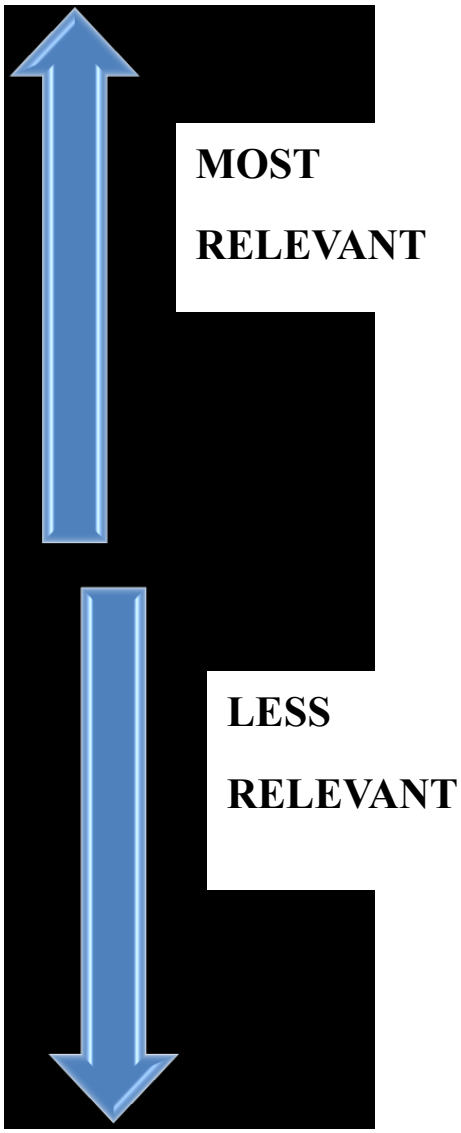
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	2,7	1	4
Information finding and analysis skills	30	2,6	1	4
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	4,1	3	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	4,2	3	5
ICT and all new technologies skills	30	4,57	3	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	4,07	2	5
Ability to create and print Marker	30	4,37	2	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	4,73	3	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	4,3	3	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	4,13	3	5
Management skills of the discipline and communication within the virtual classrooms	30	4,23	2	5
Pedagogical skills	30	3,3	3	4
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that	30	4,03	3	5

arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)				

Chart of Weight per Specific Skills Required (WpSSR)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	WpSSR
Ability to use innovative and immersive teaching techniques for knowledge transfer	21,76
ICT and all new technologies skills	21,16
Management skills of the discipline and communication within the virtual classrooms	18,19
Ability to use Power Point or similar tools to create slides for teaching purposes	17,91
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	17,2
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	17,06
Ability to create and print Marker	17,04
Ability to use PC/tablet/smartphone for digital and immersive teaching	16,93
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	16,67



Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	16,64
Pedagogical skills	12,64
Project management Skills	7,64
Information finding and analysis skills	7,44

Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,1	1	4
Flexibility and adaptability	30	3,67	1	5
Problem solving e team working	30	3,37	2	5
Ability to motivate and inspire clients	30	4,2	3	5
Customer focus	30	3,4	3	5
Ability to cope with stress	30	4,07	3	5
Empathy and active listening	30	3,8	1	4
Ability to work independently	30	3,1	1	5
Trust building ability/ reliability	30	3,73	3	5
Innovativeness / creativity	30	3,87	3	5
Verbal and non-verbal communication skills	30	3,47	2	5
Ability to build, manage and support relationships with people in training	30	3,6	3	5

Avarage Difficulty Level (E_DL)

Valid cases = 35; cases with missing value(s) =3.

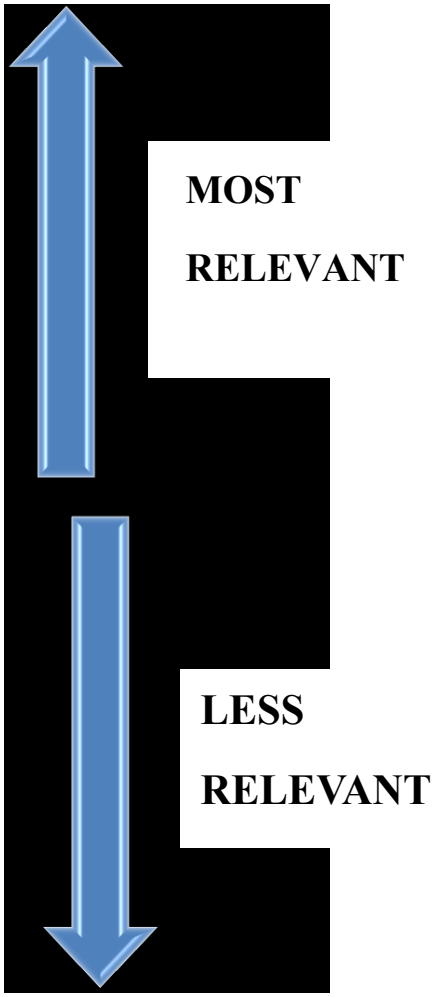
Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3	1	4
Flexibility and adaptability	30	3,4	1	5
Problem solving e team working	30	3,17	2	5
Ability to motivate and inspire clients	30	4,07	3	5

Customer focus	30	3,27	2	5
Ability to cope with stress	30	4	3	5
Empathy and active listening	30	3,63	3	5
Ability to work independently	30	2,57	1	4
Trust building ability/ reliability	30	3,5	2	5
Innovativeness / creativity	30	3,77	3	5
Verbal and non-verbal communication skills	30	3,37	2	5
Ability to build, manage and support relationships with people in training	30	3,4	3	5

Chart of Weight per Transversal Skills Required (WpTSR)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	WpTSR
Ability to motivate and inspire clients	17,09
Ability to cope with stress	16,28
Innovativeness / creativity	14,59
Empathy and active listening	13,79
Trust building ability/ reliability	13,06
Flexibility and adaptability	12,48
Ability to build, manage and support relationships with people in training	12,24
Verbal and non-verbal communication skills	11,7
Customer focus	11,12
Problem solving e team working	10,68
Teamwork/cooperation	9,3
Ability to work independently	7,97



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	30	100,00%	0	0,00%
PC, tablet o smartphone	30	100,00%	0	0,00%
Visors or cardboard for the use of VR material	6	20,00%	24	80,00%
Electronic register to manage organizational and educational commitments	21	70,00%	9	30,00%
Platform/App for delivery of lessons and content that meets security requirements	30	100,00%	0	0,00%
Other: specific software for distance learning, graphics tablet, Camera, Sharing platforms (e.g. Google Drive), Virtual boards, Data sharing software	7	23,33%	23	76,67%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide	23	76,67%	7	23,33%
Video lessons	28	93,33%	2	6,67%
Balance sheet performance virtual class	23	76,67%	7	23,33%
Student and teacher/trainer evaluation report	29	96,67%	1	3,33%

Other: Records, Monitoring Reports, Interactive and virtual tests and exercises, games and role plays, Remote group work results	11	36,67%	19	63,33%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	5	16,67%	25	83,33%

Comments

According to the results obtained thanks to the **Italian** survey, the competence profile of the expert in digital and immersive teaching for vocational training has the following characteristics (please notice that in each section the list of knowledge, skills etc.. has been created from the most relevant to the less relevant):

Key Activity	Knowledge	Specific Skills	Transversal Skills
Selection of tools and devices needed for digital and immersive teaching	Knowledge of the techniques used for digital teaching	Ability to use innovative and immersive teaching techniques for knowledge transfer	Ability to motivate and inspire clients
Involve students in the learning process	Knowledge of digital tools useful for the use of these technologies	ICT and all new technologies skills	Ability to cope with stress
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	Management skills of the discipline and communication within the virtual classrooms	Innovativeness / creativity
Definition of objectives to be achieved for students	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	Ability to use Power Point or similar tools to create slides for teaching purposes	Empathy and active listening
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	Knowledge of innovative learning environments	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	Trust building ability/ reliability
Monitoring, verification and evaluation of the	Knowledge of cardboard and viewers, their use	Ability to use evaluation and monitoring techniques	Flexibility and adaptability

results achieved by students	and the difference between these tools	in order to understand needs and difficulties of students after immersive training	
Definition of the studies program and of the educational path of the students: needs analysis	Knowledge of teaching subjects (disciplinary knowledge)	Ability to create and print Marker	Ability to build, manage and support relationships with people in training
Drafting final evaluation of students	Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	Ability to use PC/tablet/smartphone for digital and immersive teaching	Verbal and non-verbal communication skills
Information and involvement of parents	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	Customer focus
Transfer of know-how to students for the correct use of digital and immersive learning tools	Cognitive and coordination, design and management knowledges	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	Problem solving e team working Teamwork/cooperation Ability to work independently
	Knowledge of foreign languages (at least English language)	Pedagogical skills	
	Knowledge of the	Project management	

	techniques used for digital teaching	Skills	
	Knowledge of digital tools useful for the use of these technologies	Information finding and analysis skills	
	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)		
	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).		

He usually **hasn't a supervisor** and the main ouput and results of his activity are:

- Student and teacher/trainer evaluation report
- Video lessons
- Slide
- Balance sheet performance virtual class

2.1.2 Charts of key activities in Poland

Section B - Key Activities

Avarage Importance Level (B_IL)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	2,93	1	5
Definition of objectives to be achieved for students	30	3,17	1	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	3,13	1	5
Selection of tools and devices needed for digital and immersive teaching	30	3,27	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	3,5	1	5
Involve students in the learning process	30	3,87	1	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,47	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,7	2	5
Drafting final evaluation of students	30	3,67	2	5
Information and involvement of parents	30	3,53	2	5

Avarage Difficulty Level (B_DL)

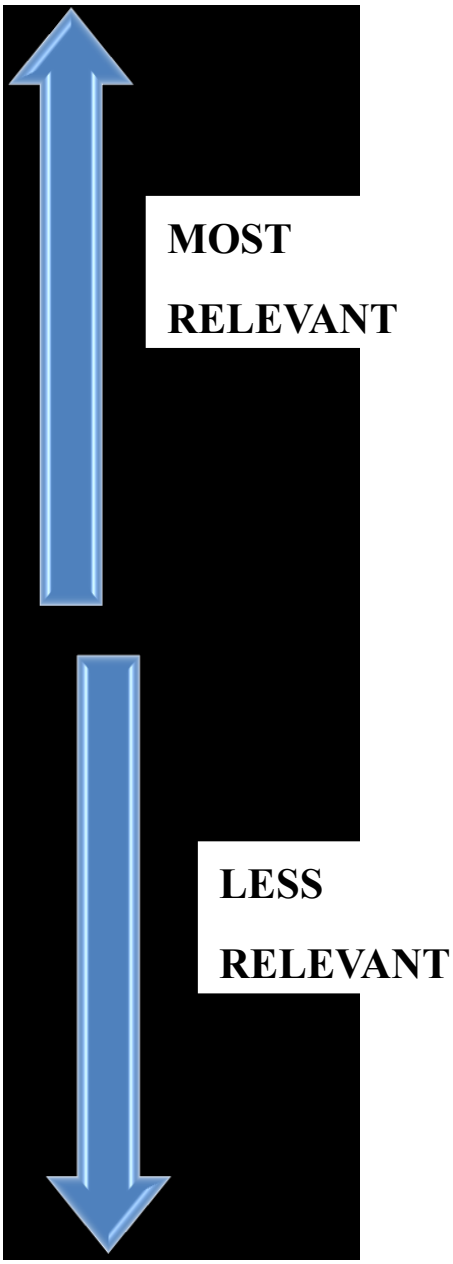
Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	3	2	5
Definition of objectives to be achieved for students	30	2,97	2	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	2,97	2	5
Selection of tools and devices needed for digital and immersive teaching	30	2,93	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	3,5	1	5
Involve students in the learning process	30	3,13	1	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,5	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,4	1	5
Drafting final evaluation of students	30	3,1	1	5
Information and involvement of parents	30	3,1	1	5

Chart of Weight per Key Activity (WpKA)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	WpKA
Monitoring, verification and evaluation of the results achieved by students	12,58
Transfer of know-how to students for the correct use of digital and immersive learning tools	12,25
Organization and implementation of targeted activities and pathways, management of learning progression	12,15
Involve students in the learning process	12,11
Drafting final evaluation of students	11,38
Information and involvement of parents	10,94
Selection of tools and devices needed for digital and immersive teaching	9,58
Definition of objectives to be achieved for students	9,41
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	9,30
Definition of the studies program and of the educational path of the students: needs analysis	8,77



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	2,87	1	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	3,73	1	5
Knowledge of digital tools useful for the use of these technologies	30	3,73	2	5
Knowledge of the techniques used for digital teaching	30	3,3	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	2,83	1	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,07	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,07	1	5
Knowledge of foreign languages (at least English language)	30	2,83	1	5
Knowledge of innovative learning environments	30	3,43	1	5
Cognitive and coordination, design and management knowledges	30	3,53	1	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,73	2	5

Avarage Difficulty Level (C_DL)

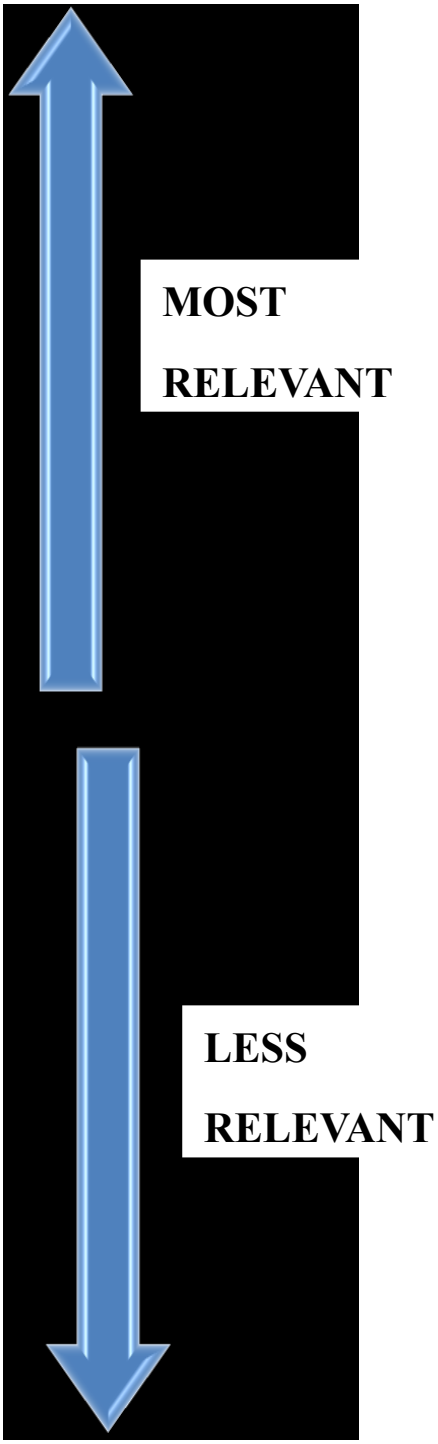
Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	3	1	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	3,97	3	5
Knowledge of digital tools useful for the use of these technologies	30	3,63	1	5
Knowledge of the techniques used for digital teaching	30	3,53	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	2,97	1	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,23	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,17	1	5
Knowledge of foreign languages (at least English language)	30	3,07	1	5
Knowledge of innovative learning environments	30	3,83	1	5
Cognitive and coordination, design and management knowledges	30	3,87	2	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,67	1	5

Chart of Weight per Knowledge Required (WpKnR)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	WpKnR
Knowledge of cardboard and viewers, their use and the difference between these tools	14,81
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	13,69
Cognitive and coordination, design and management knowledges	13,66
Knowledge of digital tools useful for the use of these technologies	13,54
Knowledge of innovative learning environments	13,14
Knowledge of the techniques used for digital teaching	11,65
Knowledge of teaching subjects (disciplinary knowledge)	9,92
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	9,73
Knowledge of foreign languages (at least English language)	8,69
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	8,61
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	8,41



Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	2,87	1	5
Information finding and analysis skills	30	3,2	1	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	3,37	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	3,8	2	5
ICT and all new technologies skills	30	3,93	1	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	2,53	1	5
Ability to create and print Marker	30	2,93	1	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,37	1	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,07	1	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,27	1	5
Management skills of the discipline and communication within the virtual classrooms	30	3,57	1	5
Pedagogical skills	30	3,33	1	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	4,03	1	5

Avarage Difficulty Level (D_DL)

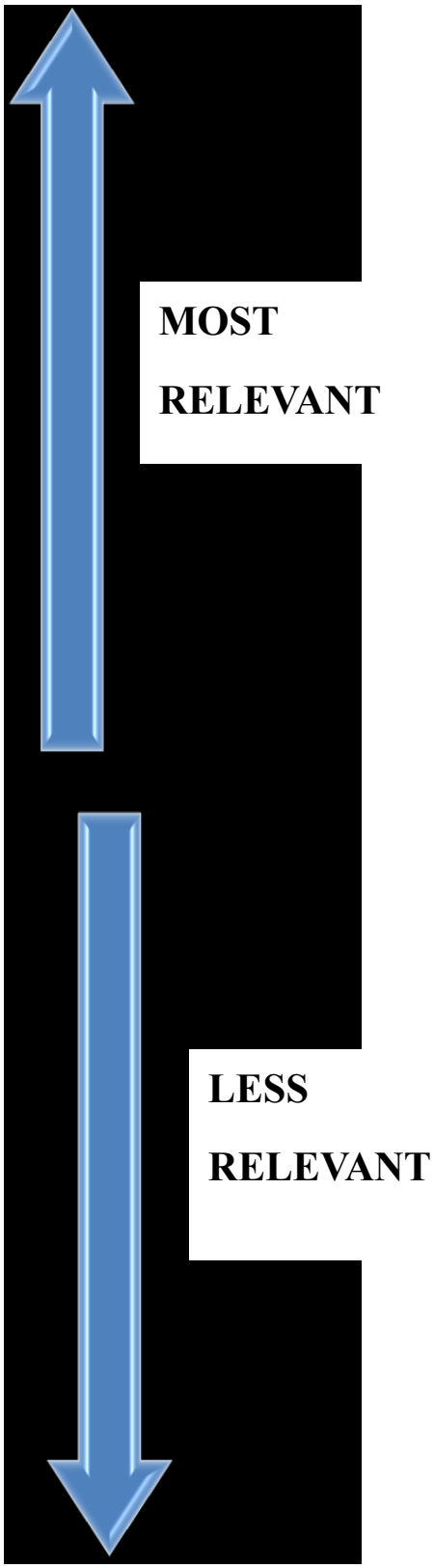
Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3	1	5
Information finding and analysis skills	30	3,57	2	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	3,7	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	3,47	1	5
ICT and all new technologies skills	30	2,97	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	3,13	2	5
Ability to create and print Marker	30	3,1	1	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,33	1	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,13	1	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,2	1	5
Management skills of the discipline and communication within the virtual classrooms	30	3,33	1	5
Pedagogical skills	30	3,8	1	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	3,6	1	5

Chart of Weight per Specific Skills Required (WpSSR)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	WpSSR
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	14,51
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	13,19
Pedagogical skills	12,65
Ability to use PC/tablet/smartphone for digital and immersive teaching	12,47
Management skills of the discipline and communication within the virtual classrooms	11,89
ICT and all new technologies skills	11,67
Information finding and analysis skills	11,42
Ability to use innovative and immersive teaching techniques for knowledge transfer	11,22
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	10,46



Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	9,61
Ability to create and print Marker	9,08
Project management Skills	8,61
Ability to use Power Point or similar tools to create slides for teaching purposes	7,92

Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,2	1	5
Flexibility and adaptability	30	3,67	1	5
Problem solving e team working	30	4	2	5
Ability to motivate and inspire clients	30	3,97	1	5
Customer focus	30	3,33	1	5
Ability to cope with stress	30	3,87	1	5
Empathy and active listening	30	3,53	1	5
Ability to work independently	30	3,73	1	5
Trust building ability/ reliability	30	3,2	1	5
Innovativeness / creativity	30	3,67	1	5
Verbal and non-verbal communication skills	30	4	2	5
Ability to build, manage and support relationships with people in training	30	3,96	1	5

Avarage Difficulty Level (E_DL)

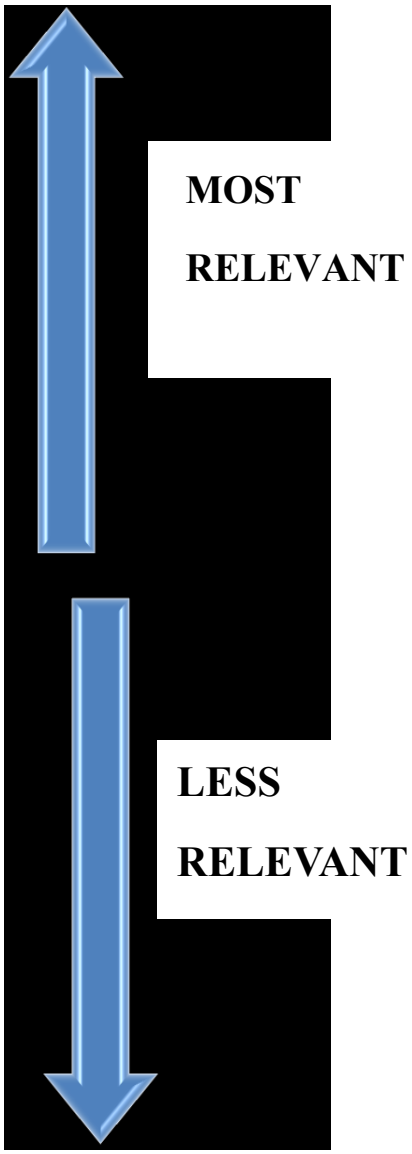
Valid cases = 35; cases with missing value(s) =3.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,23	1	5
Flexibility and adaptability	30	3,77	1	5
Problem solving e team working	30	4,03	2	5
Ability to motivate and inspire clients	30	3,933	1	5
Customer focus	30	3,7	1	5
Ability to cope with stress	30	3,57	1	5
Empathy and active listening	30	3,77	1	5
Ability to work independently	30	3,67	2	5
Trust building ability/ reliability	30	3,23	1	5
Innovativeness / creativity	30	3,77	1	5
Verbal and non-verbal communication skills	30	4,03	2	5
Ability to build, manage and support relationships with people in training	30	3,9333	1	5

Chart of Weight per Transversal Skills Required (WpTSR)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	WpTSR
Problem solving e team working	16,12
Verbal and non-verbal communication skills	16,12
Ability to motivate and inspire clients	15,61
Ability to build, manage and support relationships with people in training	15,58
Flexibility and adaptability	13,84
Innovativeness / creativity	13,84
Ability to cope with stress	13,82
Ability to work independently	13,69
Empathy and active listening	13,31
Customer focus	12,32
Teamwork/cooperation	10,34
Trust building ability/ reliability	10,34



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	30	100,00%	0	0,00%
PC, tablet o smartphone	30	100,00%	0	0,00%
Visors or cardboard for the use of VR material	14	46,67%	16	53,33%
Electronic register to manage organizational and educational commitments	28	93,33%	2	6,67%
Platform/App for delivery of lessons and content that meets security requirements	26	86,67%	4	13,33%
Other: multimedia board, Zoom, Microsoft Teams, graphics tablet, Projektor, liveworksheets, Skype	6	20,00%	24	80,00%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide	27	90,00%	3	10,00%
Video lessons	29	96,67%	1	3,33%
Balance sheet performance virtual class	14	46,67%	16	53,33%
Student and teacher/trainer evaluation report	28	93,33%	2	6,67%
Other:	/	/	/	/
Other	/	/	/	/

Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	0	0,00%	30	100,00%

Comments

According to the results obtained thanks to the **Polish** survey, the competence profile of the expert in digital and immersive teaching for vocational training has the following characteristics (please notice that in each section the list of knowledge, skills etc.. has been created from the most relevant to the less relevant):

Key Activity	Knowledge	Specific Skills	Transversal Skills
Monitoring, verification and evaluation of the results achieved by students	Knowledge of cardboard and viewers, their use and the difference between these tools	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	Problem solving e team working
Transfer of know-how to students for the correct use of digital and immersive learning tools	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	Verbal and non-verbal communication skills
Organization and implementation of targeted activities and	Cognitive and coordination, design	Pedagogical skills	Ability to motivate and inspire clients

pathways, management of learning progression	and management knowledges		
Involve students in the learning process	Knowledge of digital tools useful for the use of these technologies	Ability to use PC/tablet/smartphone for digital and immersive teaching	Ability to build, manage and support relationships with people in training
Drafting final evaluation of students	Knowledge of innovative learning environments	Management skills of the discipline and communication within the virtual classrooms	Flexibility and adaptability
Information and involvement of parents	Knowledge of the techniques used for digital teaching	ICT and all new technologies skills	Innovativeness / creativity
Selection of tools and devices needed for digital and immersive teaching	Knowledge of teaching subjects (disciplinary knowledge)	Information finding and analysis skills	Ability to cope with stress
Definition of objectives to be achieved for students	Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	Ability to use innovative and immersive teaching techniques for knowledge transfer	Ability to work independently
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	Knowledge of foreign languages (at least English language)	Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	Empathy and active listening
Definition of the studies program and of the educational path of the students: needs analysis	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	Customer focus

	methodologies)		
	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	Ability to create and print Marker	
	Knowledge of cardboard and viewers, their use and the difference between these tools	Project management Skills	
	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Ability to use Power Point or similar tools to create slides for teaching purposes	
	Cognitive and coordination, design and management knowledges		
	Knowledge of digital tools useful for the use of these technologies		

He **hasn't a supervisor** and the main ouput and results of his activity are:

- Video lessons
- Student and teacher/trainer evaluation report
- Slide

2.1.3 Charts of key activities in Slovenia

Section B - Key Activities

Avarage Importance Level (B_IL)

Valid cases = 25; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	25	4	1	5
Definition of objectives to be achieved for students	25	4,52	3	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	25	4,4	3	5
Selection of tools and devices needed for digital and immersive teaching	25	4,28	3	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	25	4,32	3	5
Involve students in the learning process	25	4,72	3	5
Organization and implementation of targeted activities and pathways, management of learning progression	25	4,56	4	5
Monitoring, verification and evaluation of the results achieved by students	25	4,36	3	5
Drafting final evaluation of students	25	3,92	2	5
Information and involvement of parents	25	3	1	5

Avarage Difficulty Level (B_DL)

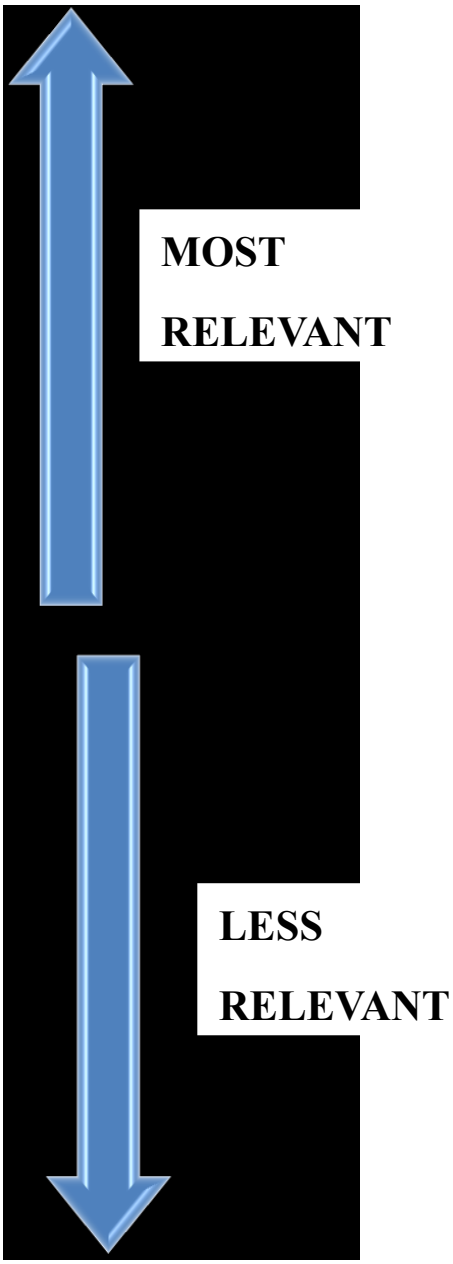
Valid cases = 25; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	25	3,68	1	5
Definition of objectives to be achieved for students	25	3,92	2	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	25	4,36	2	5
Selection of tools and devices needed for digital and immersive teaching	25	4,08	3	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	25	4	2	5
Involve students in the learning process	25	3,92	2	5
Organization and implementation of targeted activities and pathways, management of learning progression	25	4,4	3	5
Monitoring, verification and evaluation of the results achieved by students	25	3,6	1	5
Drafting final evaluation of students	25	3,36	1	5
Information and involvement of parents	25	3,12	1	5

Chart of Weight per Key Activity (WpKA)

Valid cases = 25; cases with missing value(s) = 0.

Key Activity	WpKA
Organization and implementation of targeted activities and pathways, management of learning progression	20,06
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	19,18
Involve students in the learning process	18,50
Definition of objectives to be achieved for students	17,72
Selection of tools and devices needed for digital and immersive teaching	17,46
Transfer of know-how to students for the correct use of digital and immersive learning tools	17,28
Monitoring, verification and evaluation of the results achieved by students	15,70
Definition of the studies program and of the educational path of the students: needs analysis	14,72
Drafting final evaluation of students	13,17
Information and involvement of parents	9,36



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

Valid cases = 25; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	25	2,44	1	5
Knowledge of cardboard and viewers, their use and the difference between these tools	25	2,52	1	5
Knowledge of digital tools useful for the use of these technologies	25	3,48	1	5
Knowledge of the techniques used for digital teaching	25	3,88	2	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	25	3,32	2	5
Knowledge of teaching subjects (disciplinary knowledge)	25	4,64	4	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	25	4,4	4	5
Knowledge of foreign languages (at least English language)	25	4,32	3	5
Knowledge of innovative learning environments	25	4,6	4	5
Cognitive and coordination, design and management knowledges	25	4,08	2	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	25	4,64	4	5

Avarage Difficulty Level (C_DL)

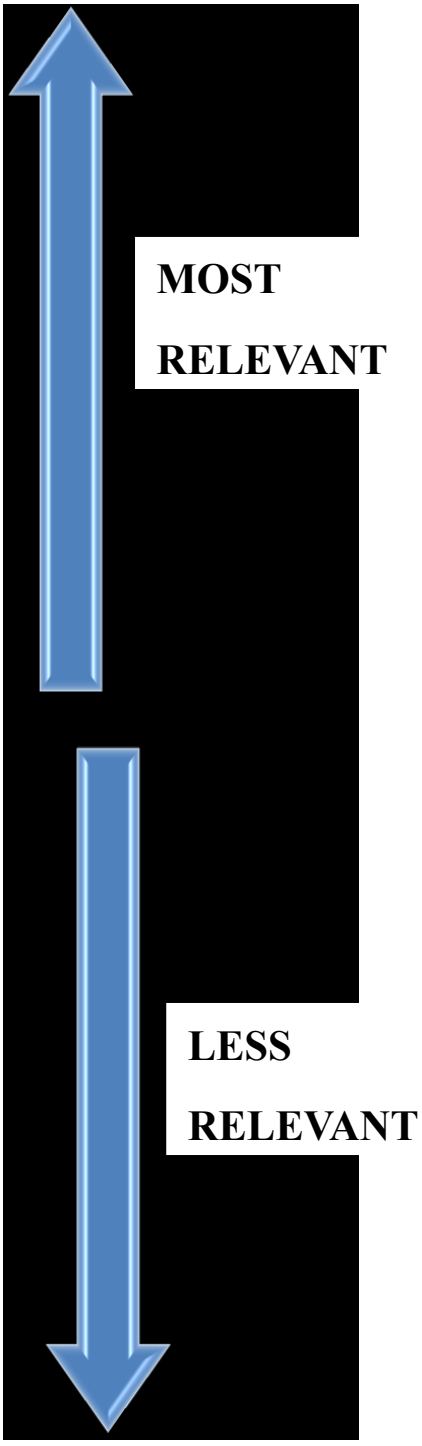
Valid cases = 25; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	25	4,16	2	5
Knowledge of cardboard and viewers, their use and the difference between these tools	25	3,88	1	5
Knowledge of digital tools useful for the use of these technologies	25	4,12	3	5
Knowledge of the techniques used for digital teaching	25	4,04	3	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	25	4	3	5
Knowledge of teaching subjects (disciplinary knowledge)	25	3,92	2	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	25	4,28	2	5
Knowledge of foreign languages (at least English language)	25	3,92	2	5
Knowledge of innovative learning environments	25	4,48	4	5
Cognitive and coordination, design and management knowledges	25	4	3	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	25	4,36	4	5

Chart of Weight per Knowledge Required (WpKnR)

Valid cases = 25; cases with missing value(s) = 0.

Knowledge	WpKnR
Knowledge of innovative learning environments	20,61
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	20,23
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	18,83
Knowledge of teaching subjects (disciplinary knowledge)	18,19
Knowledge of foreign languages (at least English language)	16,93
Cognitive and coordination, design and management knowledges	16,32
Knowledge of the techniques used for digital teaching	15,68
Knowledge of digital tools useful for the use of these technologies	14,34
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	13,28
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	10,15
Knowledge of cardboard and viewers, their use and the difference between these tools	9,78



Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 25; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	25	3,2	1	5
Information finding and analysis skills	25	4,24	2	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	25	4,32	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	25	2,56	1	5
ICT and all new technologies skills	25	3,64	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	25	2,68	1	5
Ability to create and print Marker	25	2,8	1	4
Ability to use innovative and immersive teaching techniques for knowledge transfer	25	3,96	2	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	25	2,88	2	4
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	25	4,24	3	5
Management skills of the discipline and communication within the virtual classrooms	25	4,44	4	5
Pedagogical skills	25	4,56	4	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	25	4,48	3	5

Avarage Difficulty Level (D_DL)

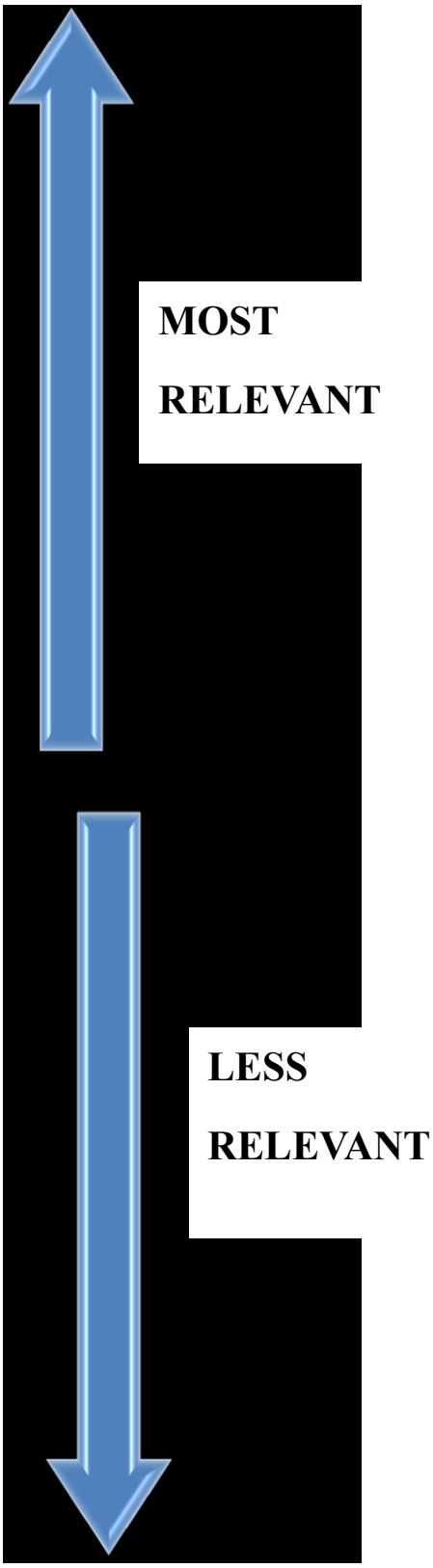
Valid cases = 25; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	25	3,88	3	5
Information finding and analysis skills	25	3,92	1	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	25	3,36	1	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	25	3,92	1	5
ICT and all new technologies skills	25	4,16	1	5
Ability to use Power Point or similar tools to create slides for teaching purposes	25	2,92	1	5
Ability to create and print Marker	25	3,4	1	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	25	3,8	1	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	25	3,56	1	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	25	3,68	2	5
Management skills of the discipline and communication within the virtual classrooms	25	2,52	2	3
Pedagogical skills	25	3,96	3	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	25	4,56	3	5

Chart of Weight per Specific Skills Required (WpSSR)

Valid cases = 25; cases with missing value(s) = 0.

Specific Skills	WpSSR
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	20,43
Pedagogical skills	18,06
Information finding and analysis skills	16,62
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	15,60
ICT and all new technologies skills	15,14
Ability to use innovative and immersive teaching techniques for knowledge transfer	15,05
Ability to use PC/tablet/smartphone for digital and immersive teaching	14,52
Project management Skills	12,42
Management skills of the discipline and communication within the virtual classrooms	11,19
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	10,25
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	10,04
Ability to create and print Marker	9,52
Ability to use Power Point or similar tools to create slides for teaching purposes	7,83



Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 25; cases with missing value(s) =0.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	25	4,28	1	5
Flexibility and adaptability	25	4,44	3	5
Problem solving e team working	25	4,32	3	5
Ability to motivate and inspire clients	25	4,36	3	5
Customer focus	25	4,12	1	5
Ability to cope with stress	25	4,32	3	5
Empathy and active listening	25	4,56	4	5
Ability to work independently	25	4,36	3	5
Trust building ability/ reliability	25	4,36	3	5
Innovativeness / creativity	25	4,2	2	5
Verbal and non-verbal communication skills	25	4,48	3	5
Ability to build, manage and support relationships with people in training	25	4,48	4	5

Avarage Difficulty Level (E_DL)

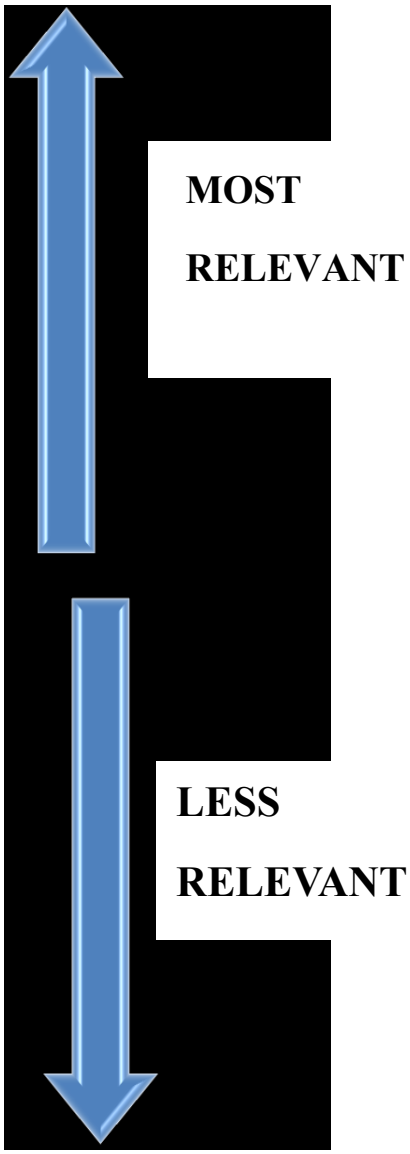
Valid cases = 35; cases with missing value(s) =3.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	25	3,92	1	5
Flexibility and adaptability	25	3,72	2	5
Problem solving e team working	25	3,96	3	5
Ability to motivate and inspire clients	25	3,88	2	5
Customer focus	25	4	2	5
Ability to cope with stress	25	4,52	4	5
Empathy and active listening	25	4,12	2	5
Ability to work independently	25	3,84	1	5
Trust building ability/ reliability	25	3,96	2	5
Innovativeness / creativity	25	4,04	2	5
Verbal and non-verbal communication skills	25	4,16	2	5
Ability to build, manage and support relationships with people in training	25	3,92	2	5

Chart of Weight per Transversal Skills Required (WpTSR)

Valid cases = 25; cases with missing value(s) =0.

Transversal skills	WpTSR
Ability to cope with stress	19,53
Empathy and active listening	18,79
Verbal and non-verbal communication skills	18,64
Ability to build, manage and support relationships with people in training	17,56
Trust building ability/ reliability	17,27
Problem solving e team working	17,11
Innovativeness / creativity	16,97
Ability to motivate and inspire clients	16,92
Teamwork/cooperation	16,78
Ability to work independently	16,74
Flexibility and adaptability	16,52
Customer focus	16,48



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	25	100,00%	0	0,00%
PC, tablet o smartphone	25	100,00%	0	0,00%
Visors or cardboard for the use of VR material	7	28,00%	18	72,00%
Electronic register to manage organizational and educational commitments	25	100,00%	0	0,00%
Platform/App for delivery of lessons and content that meets security requirements	24	96,00%	1	4,00%
Other: Video recorders, audio equipment	1	4,00%	24	96,00%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide	22	88,00%	3	12,00%
Video lessons	19	76,00%	6	24,00%
Balance sheet performance virtual class	22	88,00%	3	12,00%
Student and teacher/trainer evaluation report	20	80,00%	5	20,00%
Other:	/	/	/	/
Other	/	/	/	/

Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	11	44,00%	14	56,00%

Comments

According to the results obtained thanks to the **Slovenian** survey, the competence profile of the expert in digital and immersive teaching for vocational training has the following characteristics (please notice that in each section the list of knowledge, skills etc.. has been created from the most relevant to the less relevant):

Key Activity	Knowledge	Specific Skills	Transversal Skills
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of cardboard and viewers, their use and the difference between these tools	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	Ability to cope with stress
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Pedagogical skills	Empathy and active listening
Involve students in the learning process	Cognitive and coordination, design and management knowledges	Information finding and analysis skills	Verbal and non-verbal communication skills
Definition of	Knowledge of	Ability to use evaluation and	Ability to build,

objectives to be achieved for students	digital tools useful for the use of these technologies	monitoring techniques in order to understand needs and difficulties of students after immersive training	manage and support relationships with people in training
Selection of tools and devices needed for digital and immersive teaching	Knowledge of innovative learning environments	ICT and all new technologies skills	Trust building ability/ reliability
Transfer of know-how to students for the correct use of digital and immersive learning tools	Knowledge of the techniques used for digital teaching	Ability to use innovative and immersive teaching techniques for knowledge transfer	Problem solving e team working
Monitoring, verification and evaluation of the results achieved by students	Knowledge of teaching subjects (disciplinary knowledge)	Ability to use PC/tablet/smartphone for digital and immersive teaching	Innovativeness / creativity
Definition of the studies program and of the educational path of the students: needs analysis	Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	Project management Skills	Ability to motivate and inspire clients
Drafting final evaluation of students	Knowledge of foreign languages (at least English language)	Management skills of the discipline and communication within the virtual classrooms	Teamwork/cooperation
Information and involvement of parents	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	Ability to work independently
	Knowledge of the tools for the creation of useful	Ability to create and print Marker	

	material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).		
	Knowledge of cardboard and viewers, their use and the difference between these tools	Project management Skills	
	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Ability to use Power Point or similar tools to create slides for teaching purposes	
	Cognitive and coordination, design and management knowledges		
	Knowledge of digital tools useful for the use of these technologies		

He usually **hasn't a supervisor** and the main ouput and results of his activity are:

- Slide
- Balance sheet performance virtual class
- Student and teacher/trainer evaluation report
- Video lessons

2.1.4 Charts of key activities in Spain

Section B - Key Activities

Avarage Importance Level (B_IL)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	4,2	1	5
Definition of objectives to be achieved for students	30	3,97	1	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	4,2	1	5
Selection of tools and devices needed for digital and immersive teaching	30	4,1	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	4,17	1	5
Involve students in the learning process	30	3,77	1	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,5	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,6	1	5
Drafting final evaluation of students	30	3,73	1	5
Information and involvement of parents	30	3,53	1	5

Avarage Difficulty Level (B_DL)

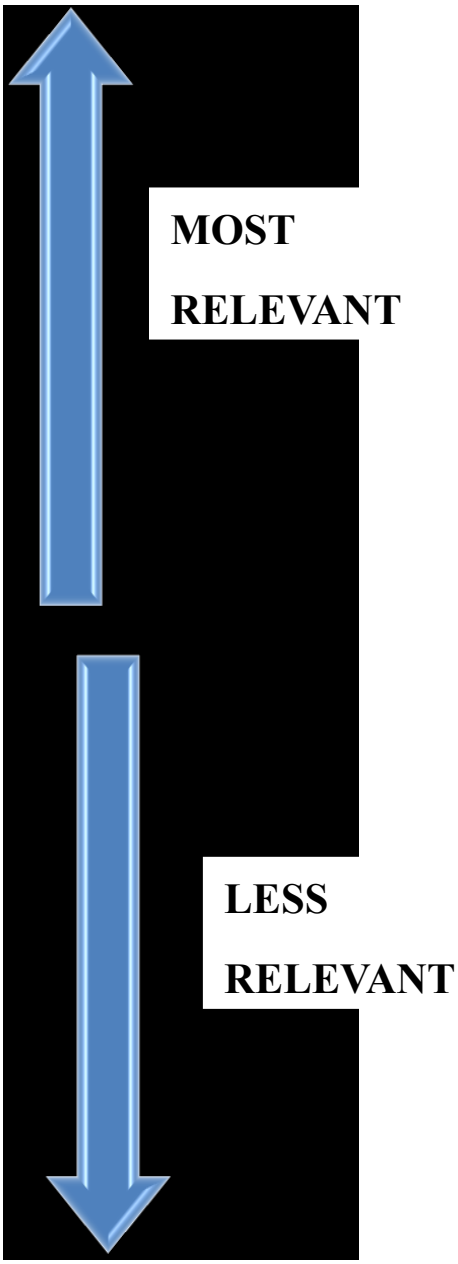
Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	4,33	1	5
Definition of objectives to be achieved for students	30	4,4	1	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	4,33	1	5
Selection of tools and devices needed for digital and immersive teaching	30	4,33	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	3,9	1	5
Involve students in the learning process	30	3,8	2	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,5	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,7	1	5
Drafting final evaluation of students	30	3,7	1	5
Information and involvement of parents	30	3,4	1	5

Chart of Weight per Key Activity (WpKA)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	WpKA
Definition of the studies program and of the educational path of the students: needs analysis	12,58
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	12,25
Selection of tools and devices needed for digital and immersive teaching	12,15
Definition of objectives to be achieved for students	12,11
Transfer of know-how to students for the correct use of digital and immersive learning tools	11,38
Involve students in the learning process	10,94
Drafting final evaluation of students	9,58
Monitoring, verification and evaluation of the results achieved by students	9,41
Organization and implementation of targeted activities and pathways, management of learning progression	9,30
Information and involvement of parents	8,77



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	3,5	1	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	3,6	2	5
Knowledge of digital tools useful for the use of these technologies	30	3,6	2	5
Knowledge of the techniques used for digital teaching	30	3,67	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	3,7	2	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,47	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,53	2	5
Knowledge of foreign languages (at least English language)	30	3,47	1	5
Knowledge of innovative learning environments	30	3,73	1	5
Cognitive and coordination, design and management knowledges	30	3,5	1	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,53	1	5

Avarage Difficulty Level (C_DL)

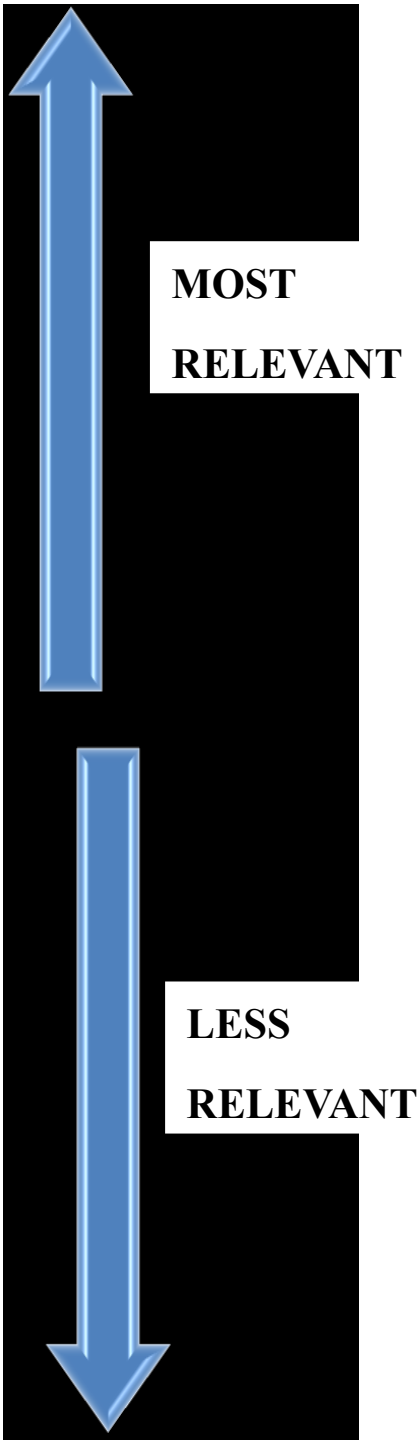
Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	3,57	1	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	3,67	2	5
Knowledge of digital tools useful for the use of these technologies	30	3,47	2	5
Knowledge of the techniques used for digital teaching	30	3,57	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	3,53	2	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,1	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,4	1	5
Knowledge of foreign languages (at least English language)	30	3,43	1	5
Knowledge of innovative learning environments	30	3,6	1	5
Cognitive and coordination, design and management knowledges	30	3,27	1	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,37	1	5

Chart of Weight per Knowledge Required (WpKnR)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	WpKnR
Knowledge of innovative learning environments	13,43
Knowledge of cardboard and viewers, their use and the difference between these tools	13,21
Knowledge of the techniques used for digital teaching	13,10
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	13,06
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	12,50
Knowledge of digital tools useful for the use of these technologies	12,49
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	12,00
Knowledge of foreign languages (at least English language)	11,90
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	11,90
Cognitive and coordination, design and management knowledges	11,45
Knowledge of teaching subjects (disciplinary knowledge)	10,76



Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,7	1	5
Information finding and analysis skills	30	3,43	2	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	3,8	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	3,73	2	5
ICT and all new technologies skills	30	3,8	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	3,47	2	5
Ability to create and print Marker	30	3,37	2	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,47	2	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,63	2	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,43	2	5
Management skills of the discipline and communication within the virtual classrooms	30	3,47	2	5
Pedagogical skills	30	3,4	2	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	3,83	2	5

Avarage Difficulty Level (D_DL)

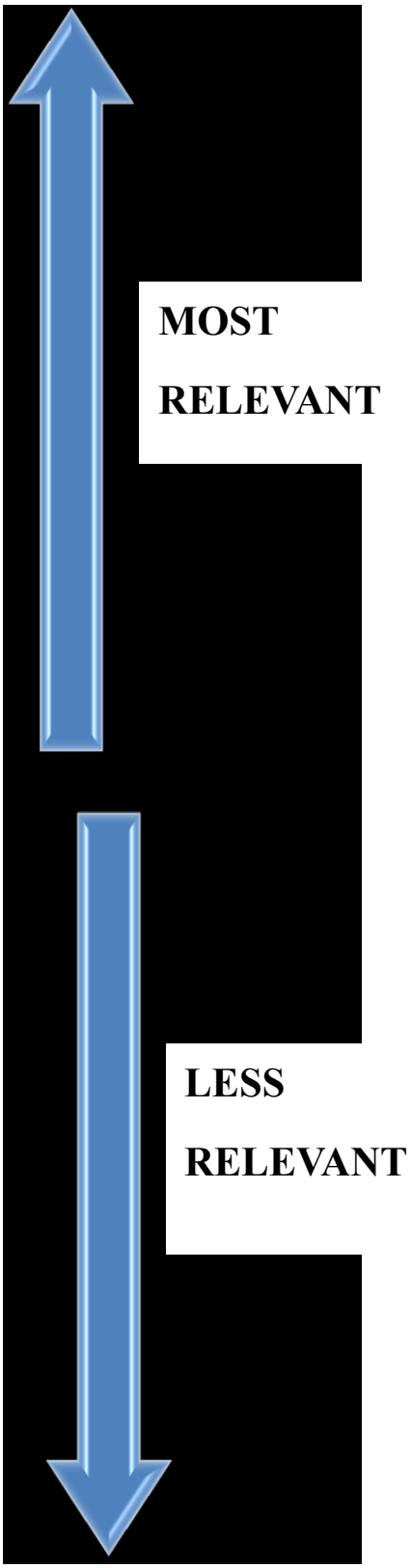
Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,37	1	5
Information finding and analysis skills	30	3,7	2	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	3,8	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	3,53	2	5
ICT and all new technologies skills	30	3,77	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	3,53	2	5
Ability to create and print Marker	30	3,47	2	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,9	2	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,63	2	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,27	2	5
Management skills of the discipline and communication within the virtual classrooms	30	3,17	2	5
Pedagogical skills	30	3,27	2	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	4,03	2	5

Chart of Weight per Specific Skills Required (WpSSR)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	WpSSR
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	15,43
Ability to use PC/tablet/smartphone for digital and immersive teaching	14,44
ICT and all new technologies skills	14,33
Ability to use innovative and immersive teaching techniques for knowledge transfer	13,53
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	13,18
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	13,17
Information finding and analysis skills	12,69
Project management Skills	12,47
Ability to use Power Point or similar tools to create slides for teaching purposes	12,25
Ability to create and print Marker	11,69



Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	11,22
Pedagogical skills	11,12
Management skills of the discipline and communication within the virtual classrooms	11,00

Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,03	2	5
Flexibility and adaptability	30	3,9	2	5
Problem solving e team working	30	3,97	2	5
Ability to motivate and inspire clients	30	3,6	2	5
Customer focus	30	3,7	2	5
Ability to cope with stress	30	3,63	2	5
Empathy and active listening	30	3,57	2	5
Ability to work independently	30	3,63	2	5
Trust building ability/ reliability	30	3,77	2	5
Innovativeness / creativity	30	3,93	2	5
Verbal and non-verbal communication skills	30	3,77	1	5
Ability to build, manage and support relationships with people in training	30	3,73	2	5

Avarage Difficulty Level (E_DL)

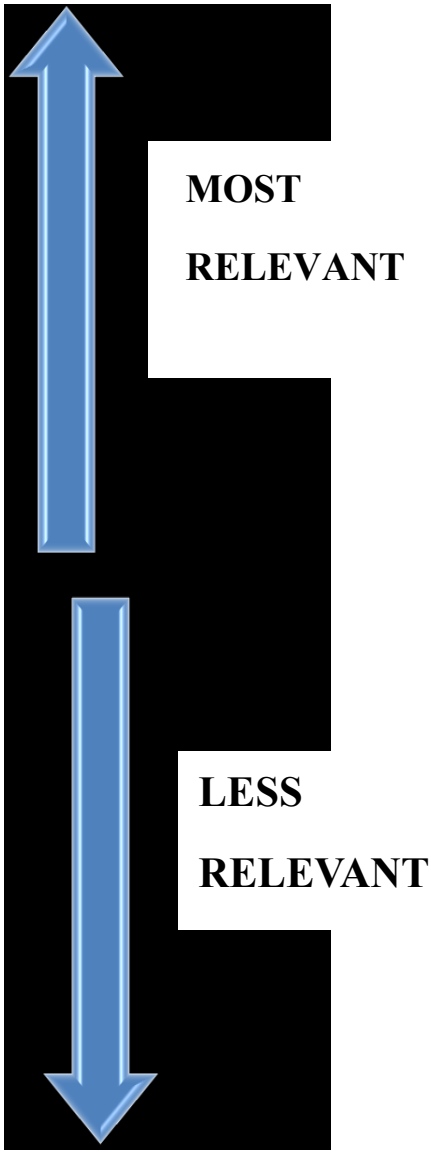
Valid cases = 35; cases with missing value(s) =3.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,03	1	5
Flexibility and adaptability	30	4,1	2	5
Problem solving e team working	30	3,73	2	5
Ability to motivate and inspire clients	30	3,77	2	5
Customer focus	30	3,97	2	5
Ability to cope with stress	30	3,77	2	5
Empathy and active listening	30	3,57	2	5
Ability to work independently	30	3,7	2	5
Trust building ability/ reliability	30	3,73	2	5
Innovativeness / creativity	30	3,8	2	5
Verbal and non-verbal communication skills	30	3,63	2	5
Ability to build, manage and support relationships with people in training	30	3,67	2	5

Chart of Weight per Transversal Skills Required (WpTSR)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	WpTSR
Teamwork/cooperation	16,24
Flexibility and adaptability	15,99
Innovativeness / creativity	14,93
Problem solving e team working	14,81
Customer focus	14,69
Trust building ability/ reliability	14,06
Ability to build, manage and support relationships with people in training	13,69
Ability to cope with stress	13,69
Verbal and non-verbal communication skills	13,69
Ability to motivate and inspire clients	13,57
Ability to work independently	13,43
Empathy and active listening	12,74



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	30	100,00%	0	0,00%
PC, tablet o smartphone	30	100,00%	0	0,00%
Visors or cardboard for the use of VR material	2	6,67%	28	93,33%
Electronic register to manage organizational and educational commitments	6	20,00%	24	80,00%
Platform/App for delivery of lessons and content that meets security requirements	27	90,00%	3	10,00%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide	25	83,33%	5	16,67%
Video lessons	22	73,33%	8	26,67%
Balance sheet performance virtual class	11	36,67%	19	63,33%
Student and teacher/trainer evaluation report	23	76,67%	7	23,33%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	23	76,67%	7	23,33%

Comments

According to the results obtained thanks to the **Spanish** survey, the competence profile of the expert in digital and immersive teaching for vocational training has the following characteristics (please notice that in each section the list of knowledge, skills etc.. has been created from the most relevant to the less relevant):

Key Activity	Knowledge	Specific Skills	Transversal Skills
Definition of the studies program and of the educational path of the students: needs analysis	Knowledge of innovative learning environments	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	Teamwork/cooperation
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	Knowledge of cardboard and viewers, their use and the difference between these tools	Ability to use PC/tablet/smartphone for digital and immersive teaching	Flexibility and adaptability
Selection of tools and devices needed for digital and immersive	Knowledge of the techniques used for digital teaching	ICT and all new technologies skills	Innovativeness / creativity

teaching			
Definition of objectives to be achieved for students	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	Ability to use innovative and immersive teaching techniques for knowledge transfer	Problem solving e team working
Transfer of know-how to students for the correct use of digital and immersive learning tools	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	Customer focus
Involve students in the learning process	Knowledge of digital tools useful for the use of these technologies	Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	Trust building ability/ reliability
Drafting final evaluation of students	Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	Information finding and analysis skills	Ability to build, manage and support relationships with people in training
Monitoring, verification and evaluation of the results achieved by students	Knowledge of foreign languages (at least English language)	Project management Skills	Ability to cope with stress
Organization and implementation of	Basic pedagogical knowleges, such as	Ability to use Power Point or similar tools to	Verbal and non-verbal

targeted activities and pathways, management of learning progression	the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	create slides for teaching purposes	communication skills
Information and involvement of parents	Cognitive and coordination, design and management knowledges	Ability to create and print Marker	Ability to motivate and inspire clients
	Knowledge of teaching subjects (disciplinary knowledge)	Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	
	Knowledge of innovative learning environments	Pedagogical skills	
	Knowledge of cardboard and viewers, their use and the difference between these tools	Management skills of the discipline and communication within the virtual classrooms	
	Knowledge of the techniques used for digital teaching		
	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm		

	packages).		

He usually **has a supervisor** and the main ouput and results of his activity are:

- Slide
- Student and teacher/trainer evaluation report
- Video lessons

2.1.5 Charts of key activities in Portugal

Section B - Key Activities

Avarage Importance Level (B_IL)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	4,10	1	5
Definition of objectives to be achieved for students	30	4,13	1	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	4,23	1	5
Selection of tools and devices needed for digital and immersive teaching	30	4,03	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	4,07	1	5
Involve students in the learning process	30	3,67	1	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,53	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,67	1	5
Drafting final evaluation of students	30	3,60	1	5
Information and involvement of parents	30	3,27	1	5

Avarage Difficulty Level (B_DL)

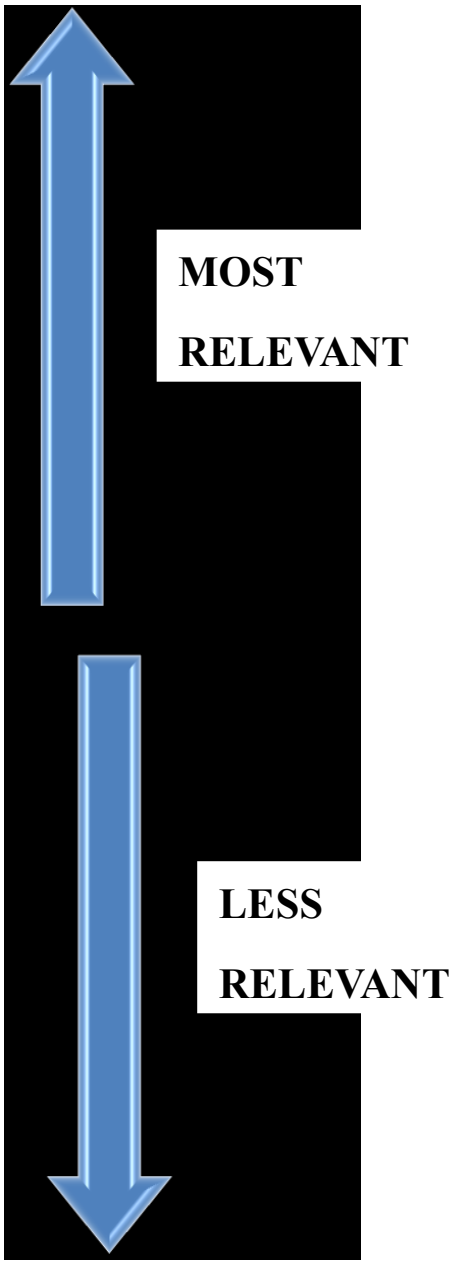
Valid cases = 30; cases with missing value(s) = 0.

Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path of the students: needs analysis	30	4,47	1	5
Definition of objectives to be achieved for students	30	4,20	1	5
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	30	4,47	1	5
Selection of tools and devices needed for digital and immersive teaching	30	4,33	1	5
Transfer of know-how to students for the correct use of digital and immersive learning tools	30	3,70	1	5
Involve students in the learning process	30	3,40	1	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,40	1	5
Monitoring, verification and evaluation of the results achieved by students	30	3,53	1	5
Drafting final evaluation of students	30	3,30	1	5
Information and involvement of parents	30	3,27	1	5

Chart of Weight per Key Activity (WpKA)

Valid cases = 30; cases with missing value(s) = 0.

Key Activity	WpKA
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	18,91
Definition of the studies program and of the educational path of the students: needs analysis	18,33
Selection of tools and devices needed for digital and immersive teaching	17,45
Definition of objectives to be achieved for students	17,35
Transfer of know-how to students for the correct use of digital and immersive learning tools	15,06
Monitoring, verification and evaluation of the results achieved by students	12,96
Involve students in the learning process	12,48
Organization and implementation of targeted activities and pathways, management of learning progression	12,00
Drafting final evaluation of students	11,88
Information and involvement of parents	10,69



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	3,90	3	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	4,13	2	5
Knowledge of digital tools useful for the use of these technologies	30	4,07	2	5
Knowledge of the techniques used for digital teaching	30	3,80	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	3,70	2	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,90	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,80	2	5
Knowledge of foreign languages (at least English language)	30	3,67	1	5
Knowledge of innovative learning environments	30	4,03	1	5
Cognitive and coordination, design and management knowledges	30	3,67	1	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,93	1	5

Avarage Difficulty Level (C_DL)

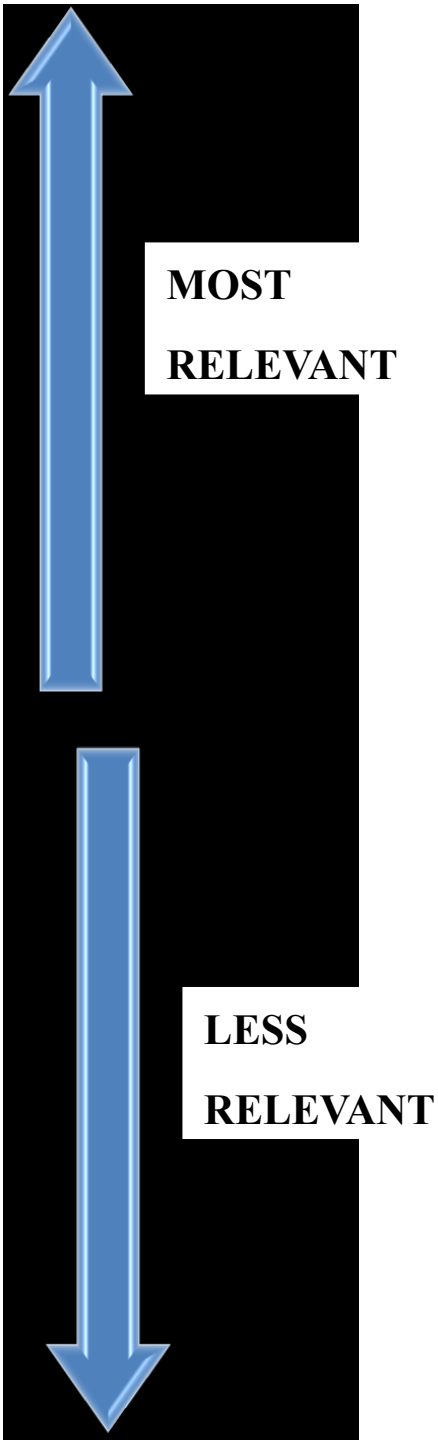
Valid cases = 30; cases with missing value(s) = 0.

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	30	3,90	3	5
Knowledge of cardboard and viewers, their use and the difference between these tools	30	4,20	3	5
Knowledge of digital tools useful for the use of these technologies	30	3,87	2	5
Knowledge of the techniques used for digital teaching	30	4,10	1	5
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	30	3,67	2	5
Knowledge of teaching subjects (disciplinary knowledge)	30	3,73	1	5
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	30	3,70	1	5
Knowledge of foreign languages (at least English language)	30	3,87	1	5
Knowledge of innovative learning environments	30	4,07	1	5
Cognitive and coordination, design and management knowledges	30	3,70	1	5
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	30	3,83	1	5

Chart of Weight per Knowledge Required (WpKnR)

Valid cases = 30; cases with missing value(s) = 0.

Knowledge	WpKnR
Knowledge of cardboard and viewers, their use and the difference between these tools	17,35
Knowledge of innovative learning environments	16,40
Knowledge of digital tools useful for the use of these technologies	15,75
Knowledge of the techniques used for digital teaching	15,58
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	15,21
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	15,05
Knowledge of teaching subjects (disciplinary knowledge)	14,55
Knowledge of foreign languages (at least English language)	14,20
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	14,06
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	13,58
Cognitive and coordination, design and management knowledges	13,58



Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,77	1	5
Information finding and analysis skills	30	3,70	2	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	3,97	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	4,23	2	5
ICT and all new technologies skills	30	4,30	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	3,43	1	5
Ability to create and print Marker	30	3,63	1	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,93	2	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,90	1	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,90	2	5
Management skills of the discipline and communication within the virtual classrooms	30	3,93	2	5
Pedagogical skills	30	4,17	2	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	4,10	2	5

Avarage Difficulty Level (D_DL)

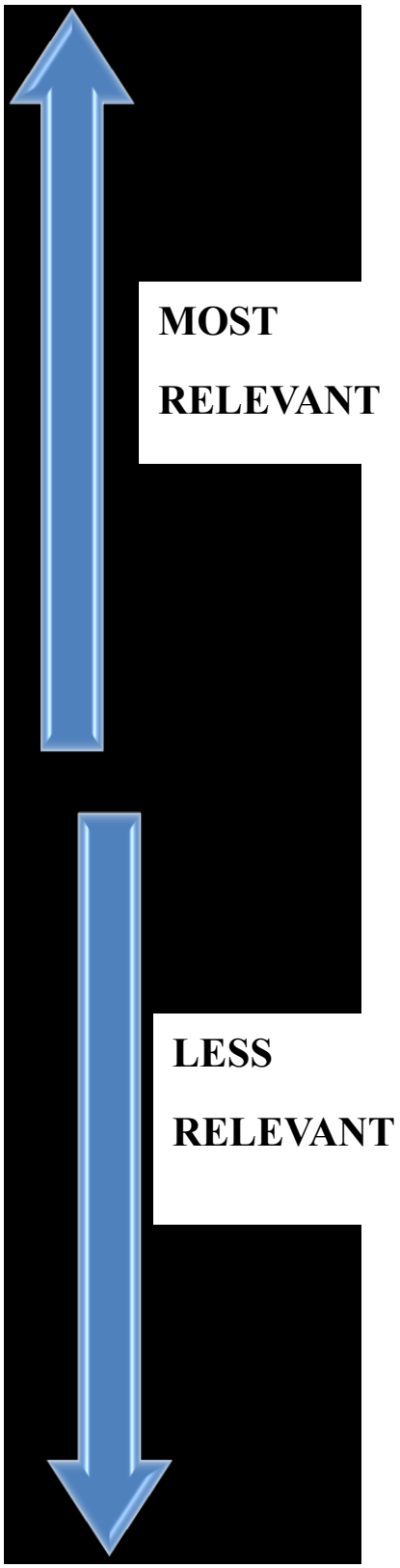
Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,63	1	5
Information finding and analysis skills	30	4,23	3	5
Ability to use PC/tablet/smartphone for digital and immersive teaching	30	4,23	2	5
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	30	4,23	2	5
ICT and all new technologies skills	30	3,93	2	5
Ability to use Power Point or similar tools to create slides for teaching purposes	30	3,77	2	5
Ability to create and print Marker	30	3,57	1	5
Ability to use innovative and immersive teaching techniques for knowledge transfer	30	3,97	2	5
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	30	3,90	1	5
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	30	3,77	1	5
Management skills of the discipline and communication within the virtual classrooms	30	3,57	2	5
Pedagogical skills	30	3,93	2	5
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	30	4,00	2	5

Chart of Weight per Specific Skills Required (WpSSR)

Valid cases = 30; cases with missing value(s) = 0.

Specific Skills	WpSSR
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	17,89
ICT and all new technologies skills	16,90
Ability to use PC/tablet/smartphone for digital and immersive teaching	16,79
Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	16,40
Pedagogical skills	16,39
Information finding and analysis skills	15,65
Ability to use innovative and immersive teaching techniques for knowledge transfer	15,60
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	15,21
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	14,70
Management skills of the discipline and communication within the virtual classrooms	14,03



Project management Skills	13,69
Ability to create and print Marker	12,96
Ability to use Power Point or similar tools to create slides for teaching purposes	12,93

Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,1	3	5
Flexibility and adaptability	30	4,53	2	5
Problem solving e team working	30	4,50	3	5
Ability to motivate and inspire clients	30	4,43	3	5
Customer focus	30	3,90	2	5
Ability to cope with stress	30	3,83	2	5
Empathy and active listening	30	3,83	2	5
Ability to work independently	30	4,10	2	5
Trust building ability/ reliability	30	4,07	2	5
Innovativeness / creativity	30	4,07	2	5
Verbal and non-verbal communication skills	30	3,93	1	5
Ability to build, manage and support relationships with people in training	30	4,17	2	5

Avarage Difficulty Level (E_DL)

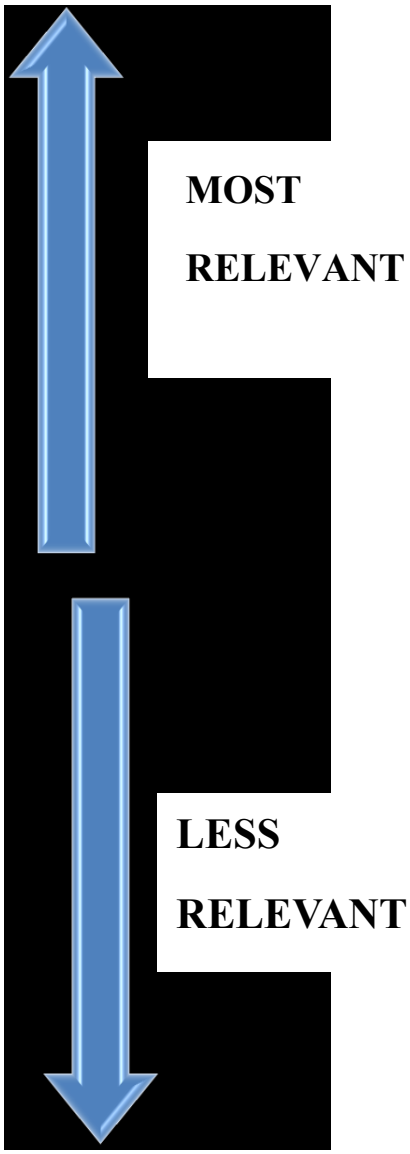
Valid cases = 35; cases with missing value(s) =3.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,47	3	5
Flexibility and adaptability	30	4,50	2	5
Problem solving e team working	30	4,27	3	5
Ability to motivate and inspire clients	30	4,33	3	5
Customer focus	30	3,90	2	5
Ability to cope with stress	30	3,93	2	5
Empathy and active listening	30	3,73	2	5
Ability to work independently	30	3,87	2	5
Trust building ability/ reliability	30	3,83	2	5
Innovativeness / creativity	30	4,03	2	5
Verbal and non-verbal communication skills	30	3,83	2	5
Ability to build, manage and support relationships with people in training	30	3,93	2	5

Chart of Weight per Transversal Skills Required (WpTSR)

Valid cases = 30; cases with missing value(s) =0.

Transversal skills	WpTSR
Flexibility and adaptability	20,39
Problem solving e team working	19,22
Ability to motivate and inspire clients	19,18
Teamwork/cooperation	18,33
Innovativeness / creativity	16,40
Ability to build, manage and support relationships with people in training	16,39
Ability to work independently	15,87
Trust building ability/ reliability	15,59
Customer focus	15,21
Ability to cope with stress	15,05
Verbal and non-verbal communication skills	15,05
Empathy and active listening	14,29



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	30	100,00%	0	0,00%
PC, tablet o smartphone	30	100,00%	0	0,00%
Visors or cardboard for the use of VR material	2	6,67%	28	93,33%
Electronic register to manage organizational and educational commitments	7	23,33%	23	76,67%
Platform/App for delivery of lessons and content that meets security requirements	27	90,00%	3	10,00%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide	24	80,00%	6	20,00%
Video lessons	23	76,67%	7	23,33%
Balance sheet performance virtual class	11	36,67%	19	63,33%
Student and teacher/trainer evaluation report	22	73,33%	8	26,67%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	21	70,00%	9	30,00%

Comments

According to the results obtained thanks to the **Portuguese** survey, the competence profile of the expert in digital and immersive teaching for vocational training has the following characteristics (please notice that in each section the list of knowledge, skills etc.. has been created from the most relevant to the less relevant):

Key Activity	Knowledge	Specific Skills	Transversal Skills
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	Knowledge of cardboard and viewers, their use and the difference between these tools	Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	Flexibility and adaptability
Definition of the studies program and of the educational path of the students: needs analysis	Knowledge of innovative learning environments	ICT and all new technologies skills	Problem solving e team working
Selection of tools and devices needed for digital and immersive teaching	Knowledge of digital tools useful for the use of these technologies	Ability to use PC/tablet/smartphone for digital and immersive teaching	Ability to motivate and inspire clients
Definition of objectives to be achieved for students	Knowledge of the techniques used for digital teaching	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the	Teamwork/cooperation

		"virtual" class between students or between student and teacher, to recognize problems and know how to manage them)	
Transfer of know-how to students for the correct use of digital and immersive learning tools	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	Pedagogical skills	Innovativeness / creativity
Monitoring, verification and evaluation of the results achieved by students	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	Information finding and analysis skills	Ability to build, manage and support relationships with people in training
Involve students in the learning process	Knowledge of teaching subjects (disciplinary knowledge)	Ability to use innovative and immersive teaching techniques for knowledge transfer	Ability to work independently
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of foreign languages (at least English language)	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	Trust building ability/ reliability
Drafting final evaluation of students	Knowledge of tools for the evaluation of	Ability to use evaluation and	Customer focus

	technical skills (hard skills) and transversal skills (soft skills).	monitoring techniques in order to understand needs and difficulties of students after immersive training	
Information and involvement of parents	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	Management skills of the discipline and communication within the virtual classrooms	Ability to cope with stress
	Cognitive and coordination, design and management knowledges	Project management Skills	
	Knowledge of cardboard and viewers, their use and the difference between these tools	Ability to create and print Marker	
	Knowledge of innovative learning environments	Ability to use Power Point or similar tools to create slides for teaching purposes	
	Knowledge of digital tools useful for the use of these technologies		
	Knowledge of the techniques used for digital teaching		

He **usually has a supervisor** and the main ouput and results of his activity are:

- Slide
- Video lessons
- Student and teacher/trainer evaluation report

2.2 GENERAL FLOW CHART

After the presentation of results of all national surveys, we can now identify the common competence profile of Experts in digital and immersive teaching for vocational training.

So, first of all we have to compare the results obtained in each involved Partner country according to the different sections of the submitted questionnaire:

- **The Weight per Key Activity**
- **The Weight per Knowledge**
- **The Weight per Specific Skill**
- **The Weight per Transversal Skill**

For each section we will identify the **general avarage**: by comparing the medium results obtained in all involved Partner country concerning the weight of key activities, knowledge and skills foreseen in the questionnaire, we will find the total avarage obtained.

In the second and last section of this report **we will associate the key activity with the knowledge and the skills**, in order to identify the competence units that characterize the Professional profile of the Expert in digital and immersive teaching for vocational training.

2.2.1 Definition of a common flow chart of key activity

Key activity

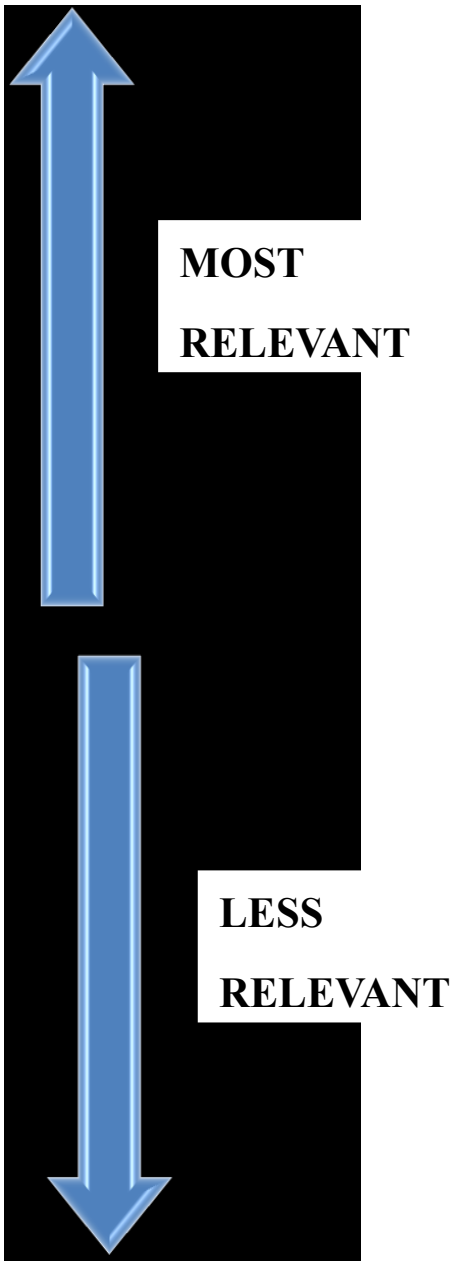
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of key activity referring the VET Teachers and Trainers on the use of digital and immersive teaching methods.

Key Activity	Italy	Poland	Slovenia	Spain	Portugal	General Avarage
Definition of the studies program and of the educational path of the students: needs analysis	11,10	8,77	14,72	12,58	18,33	**13,10**
Definition of objectives to be achieved for students	12,09	9,41	17,72	12,11	17,35	**13,74**
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	11,99	9,30	19,18	12,25	18,91	**14,33**
Selection of tools and devices needed for digital and immersive teaching	19,36	9,58	17,46	12,15	17,45	**15,20**
Transfer of know-how to students for the correct use of digital and immersive learning tools	7,75	12,25	17,28	11,38	15,06	**12,74**
Involve students in the learning process	17,64	12,11	18,50	10,94	12,48	**14,33**
Organization and implementation of targeted activities and pathways, management of learning progression	13,68	12,15	20,06	9,30	12,00	**13,44**
Monitoring, verification and evaluation of the results achieved by students	11,55	12,58	15,70	9,41	12,96	**12,44**
Drafting final evaluation of students	9,9	11,38	13,17	9,58	11,88	**11,18**

Information and involvement of parents	7,84	10,94	9,36	8,77	10,69	**9,52**

According to the table above, the general flowchart representing the key activities done by VET Teachers and Trainers on the use of digital and immersive teaching methods (from the most relevant to the less relevant) is the following:

Key Activity	
Selection of tools and devices needed for digital and immersive teaching	15,20
Involve students in the learning process	14,33
Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	14,33
Definition of objectives to be achieved for students	13,74
Organization and implementation of targeted activities and pathways, management of learning progression	13,44
Definition of the studies program and of the educational path of the students: needs analysis	13,10
Transfer of know-how to students for the correct use of digital and immersive learning tools	12,74
Monitoring, verification and evaluation of the results achieved by students	12,44
Drafting final evaluation of students	11,18
Information and involvement of parents	9,52



Knowledge

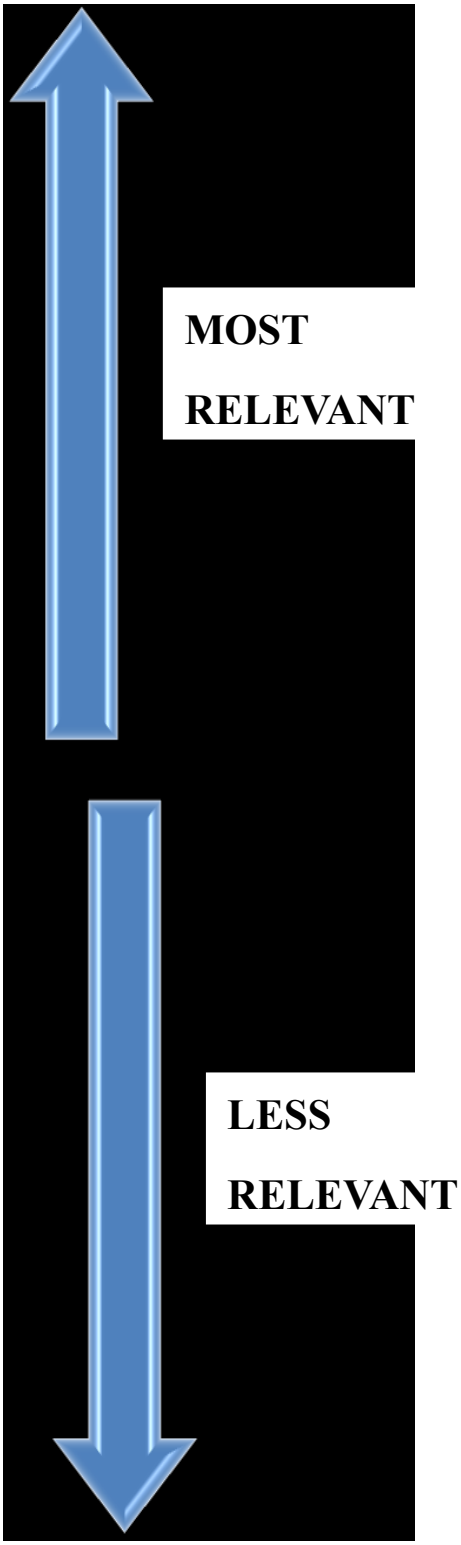
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of knowledge referring the VET Teachers and Trainers on the use of digital and immersive teaching methods.

Knowledge	Italy	Poland	Slovenia	Spain	Portugal	General Avarage
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	20,25	8,61	10,15	12,50	15,21	**13,344**
Knowledge of cardboard and viewers, their use and the difference between these tools	18,33	14,81	9,78	13,21	17,35	**14,696**
Knowledge of digital tools useful for the use of these technologies	20,97	13,54	14,34	12,49	15,75	**15,418**
Knowledge of the techniques used for digital teaching	21,16	11,65	15,68	13,10	15,58	**15,434**
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	18,92	8,41	13,28	13,06	13,58	**13,45**
Knowledge of teaching subjects (disciplinary knowledge)	14,52	9,92	18,19	10,76	14,55	**13,588**
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	13,77	9,73	18,83	12,00	14,06	**13,678**
Knowledge of foreign languages (at least English	7,92	8,69	16,93	11,90	14,20	**11,928**

language)						
Knowledge of innovative learning environments	18,92	13,14	20,61	13,43	16,40	**16,5**
Cognitive and coordination, design and management knowledges	11,20	13,66	16,32	11,45	1,58	**10,842**
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	12,26	13,69	20,23	11,90	15,05	**14,626**

According to the table above, the general flowchart representing the knowledge requested to VET Teachers and Trainers on the use of digital and immersive teaching methods (from the most relevant to the less relevant) is the following:

Knowledge	
Knowledge of innovative learning environments	16,5
Knowledge of the techniques used for digital teaching	15,434
Knowledge of digital tools useful for the use of these technologies	15,418
Knowledge of cardboard and viewers, their use and the difference between these tools	14,696
Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention	14,626
Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).	13,678
Knowledge of teaching subjects (disciplinary knowledge)	13,588
Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).	13,45
Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)	13,344
Knowledge of foreign languages (at least English language)	11,928
Cognitive and coordination, design and management knowledges	10,842



Specific Skills

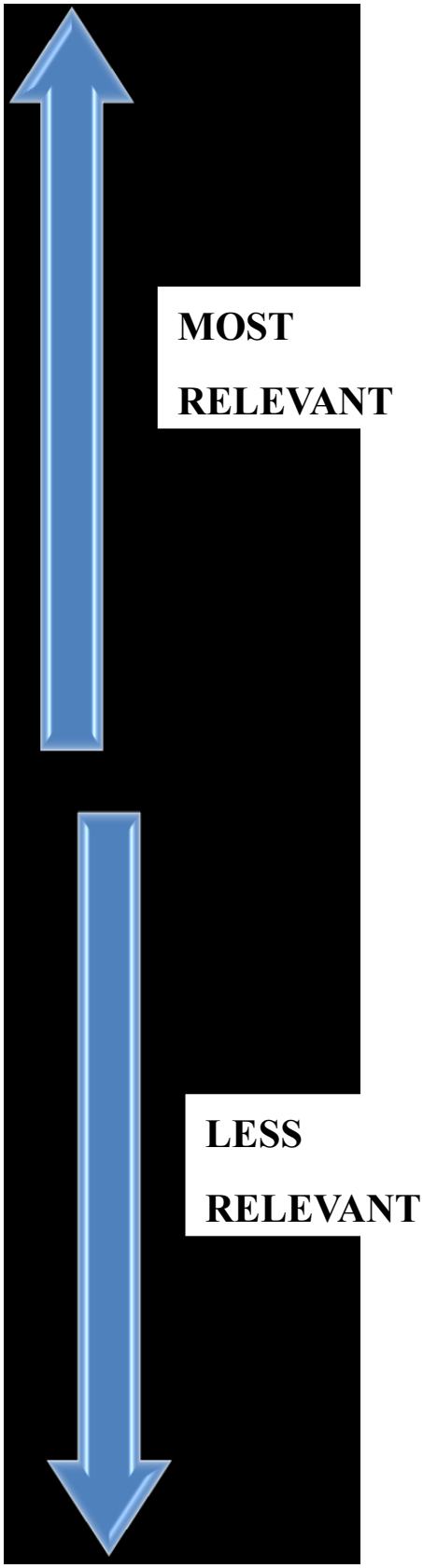
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of specific skills referring the VET Teachers and Trainers on the use of digital and immersive teaching methods.

Specific Skills	Italy	Poland	Slovenia	Spain	Portugal	General Avarage
1. Project management Skills	7,64	8,61	12,42	12,47	13,69	**10,97**
2. Information finding and analysis skills	7,44	11,42	16,62	12,69	15,65	**12,76**
3. Ability to use PC/tablet/smartphone for digital and immersive teaching	16,93	12,47	14,52	14,44	16,79	**15,03**
4. Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	16,67	13,19	10,04	13,17	17,89	**14,19**
5. ICT and all new technologies skills	21,16	11,67	15,14	14,33	16,90	**15,84**
6. Ability to use Power Point or similar tools to create slides for teaching purposes	17,91	7,92	7,83	12,25	12,93	**11,77**
7. Ability to create and print Marker	17,04	9,08	9,52	11,69	12,96	**12,06**
8. Ability to use innovative and immersive teaching techniques for knowledge transfer	21,76	11,22	15,05	13,53	15,60	**15,43**
9. Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	17,20	9,61	10,25	13,18	15,21	**13,09**
10. Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of	17,06	10,46	15,60	11,22	14,70	**13,81**

students after immersive training						
11. Management skills of the discipline and communication within the virtual classrooms	18,19	11,89	11,19	11,00	14,03	**13,26**
12. Pedagogical skills	12,64	12,65	18,06	11,12	16,39	**14,17**
13. Relational and psychopedagogical skills	16,64	14,51	20,43	15,43	16,40	**16,68**

According to the table above, the general flowchart representing the specific skills requested to VET Teachers and Trainers on the use of digital and immersive teaching methods (from the most relevant to the less relevant) is the following:

Specific skills	
Relational and psychopedagogical skills	16,68
ICT and all new technologies skills	15,84
Ability to use innovative and immersive teaching techniques for knowledge transfer	15,43
Ability to use PC/tablet/smartphone for digital and immersive teaching	15,03
Ability to use 360° cameras for the creation of useful content for immersive teaching purposes	14,19
Pedagogical skills	14,17
Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training	13,81
Management skills of the discipline and communication within the virtual classrooms	13,26
Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application	13,09
Information finding and analysis skills	12,76
Ability to create and print Marker	12,06
Ability to use Power Point or similar tools to create slides for teaching purposes	11,77



Project management Skills	10,97

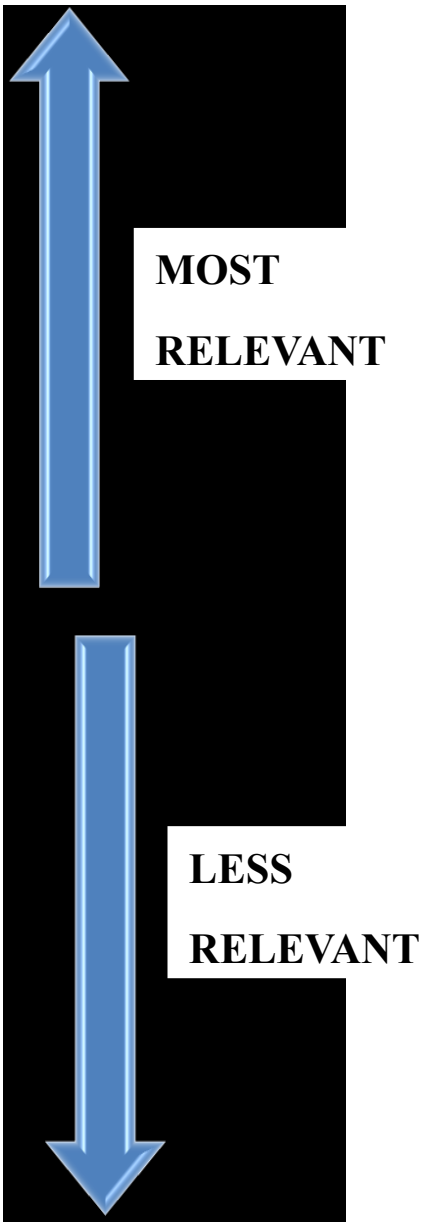
Transversal skills (attitudes and behaviors)

In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of Transversal skills referring the VET Teachers and Trainers on the use of digital and immersive teaching methods.

Transversal skills	Italy	Poland	Slovenia	Spain	Portugal	General Avarage
1. Teamwork /cooperation	9,30	10,34	16,78	16,24	18,33	**14,20**
2. Flexibility and adaptability	12,48	13,84	16,52	15,99	20,39	**15,84**
3. Problem solving e team working	10,68	16,12	17,11	14,81	19,22	**15,59**
4. Ability to motivate and inspire clients	17,09	15,61	16,92	13,57	19,18	**16,47**
5. Customer focus	11,12	12,32	16,48	14,69	15,21	**13,96**
6. Ability to cope with stress	16,28	13,82	19,53	13,69	15,05	**15,67**
7. Empathy and active listening	13,79	13,31	18,79	12,74	14,29	**14,58**
8. Ability to work independently	7,97	13,69	16,74	13,43	15,87	**13,54**
9. Trust building ability/ reliability	13,06	10,34	17,27	14,06	15,59	**14,06**
10. Innovativeness / creativity	14,59	13,84	16,97	14,93	16,40	**15,35**
11. Verbal and non-verbal communication skills	11,70	16,12	18,64	13,69	15,05	**15,04**
12. Ability to build, manage and support relationships with people in training	12,24	15,58	17,56	13,69	16,39	**15,09**

According to the table above, the general flowchart representing the Transversal skills requested to VET Teachers and Trainers on the use of digital and immersive teaching methods (from the most relevant to the less relevant) is the following:

Transversal skills	
Ability to motivate and inspire clients	16,47
Flexibility and adaptability	15,84
Ability to cope with stress	15,67
Problem solving e team working	15,59
Innovativeness / creativity	15,35
Ability to build, manage and support relationships with people in training	15,09
Verbal and non-verbal communication skills	15,04
Empathy and active listening	14,58
Teamwork /cooperation	14,20
Trust building ability/ reliability	14,06
Customer focus	13,96
Ability to work independently	13,54



SECOND SECTION

Professional profile

3.1 CONCEPTUAL AND EMPIRICAL FRAMEWORK

This second and last section has as the main objective to **present the schematic professional profile of the Expert in digital and immersive teaching for vocational training, including the activities and levels of knowledge, skills, personal characteristics and performance required to perform activities**.

3.1.1 Methodological approach

From a statistical point of view, for each WpKA variable expose, those variables can fit in one of the three distinct intervals of the score that was created:

- KEY-ACTIVITIES LESS CONSIDERED – from 1 to 8;
- KEY-ACTIVITIES MODERATELY CONSIDERED – from 9 to 17;
- KEY-ACTIVITIES HEAVILY CONSIDERED – from 18 to 25.

In order to plan learning unit linked to each key activity, we have to consider that each knowledge, specific skill and trasnversal skill indicated in the questionnaire is connected to specific key activities. The connection between Key activity, knowledge and skills can be represented thanks to the following matrixes.

3.1.2 Matrix for knowledge required associated to perform the key activities

Key Activity	Associated knowledge
KA1 - Definition of the studies program and of the educational path of the students: needs analysis	**KnR 6 -** Knowledge of teaching subjects **KnR 7 -** Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) **KnR 10 -** Cognitive and coordination, design and management knowledges **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention
KA2 - Definition of objectives to be achieved for students	**KnR 7 -** Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) **KnR 10 -** Cognitive and coordination, design and management knowledges **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention
KA3 - Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	**KnR 3** - Knowledge of digital tools useful for the use of these technologies **KnR 4** - Knowledge of the techniques used for digital teaching **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages) **KnR 8** - Knowledge of foreign languages **KnR 10 -** Cognitive and coordination, design and management knowledges
KA4 - Selection of tools and devices needed for digital and immersive teaching	**KnR 2** - Knowledge of cardboard and viewers, their use and the difference between these tools **KnR 3** - Knowledge of digital tools useful for the use of these technologies **KnR 4** - Knowledge of the techniques used for digital teaching **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power

	Point, e-learning and scorm packages) **KnR 9** - Knowledge of innovative learning environments
KA5 - Transfer of know-how to students for the correct use of digital and immersive learning tools	**KnR 2** - Knowledge of cardboard and viewers, their use and the difference between these tools **KnR 3** - Knowledge of digital tools useful for the use of these technologies **KnR 4** - Knowledge of the techniques used for digital teaching **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages) **KnR 8** - Knowledge of foreign languages **KnR 9** - Knowledge of innovative learning environments **KnR 10 -** Cognitive and coordination, design and management knowledges
KA6 - Involve students in the learning process	**KnR 10 -** Cognitive and coordination, design and management knowledges **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention
KA7 - Organization and implementation of targeted activities and pathways, management of learning progression	**KnR 7 -** Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention
KA8 - Monitoring, verification and evaluation of the results achieved by students	**KnR 6 -** Knowledge of teaching subjects **KnR 7 -** Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention
KA9 - Drafting final evaluation of students	**KnR 6 -** Knowledge of teaching subjects **KnR 7 -** Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) **KnR 11 -** Basic pedagogical knowleges, such as the ability to

	master situations, activate methodologies, develop projects consistent with the educational intervention
KA10 - Information and involvement of parents	**KnR 10 -** Cognitive and coordination, design and management knowledges **KnR 11 -** Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention

3.1.3 Matrix for specific skills required associated to perform the key activities

Key Activity	Associated specific skills
KA1 - Definition of the studies program and of the educational path of the students: needs analysis	**SSR 1** - Project management Skills **SSR 2** - Information finding and analysis skills **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training **SSR 12** - Pedagogical skills
KA2 - Definition of objectives to be achieved for students	**SSR 1** - Project management Skills **SSR 2** - Information finding and analysis skills **SSR 12** - Pedagogical skills **SSR 13** - Relational and psychopedagogical skills
KA3 - Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	**SSR 2** - Information finding and analysis skills **SSR 5** - ICT and all new technologies skills **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer
KA4 - Selection of tools and devices needed for digital and immersive teaching	**SSR 3** - Ability to use PC/tablet/smartphone for digital and immersive teaching **SSR 4** - Ability to use 360° cameras for the creation of useful content for immersive teaching purposes **SSR 5** - ICT and all new technologies skills **SSR 7** - Ability to create and print Marker
KA5 - Transfer of know-how to students for the correct use of digital and immersive learning tools	**SSR 2** - Information finding and analysis skills **SSR 4** - Ability to use 360° cameras for the creation of useful content for immersive teaching purposes **SSR 5** - ICT and all new technologies skills **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes **SSR 7** - Ability to create and print Marker **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer
KA6 - Involve students in the learning process	**SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training

	SSR 11 - Management skills of the discipline and communication within the virtual classrooms **SSR 12** - Pedagogical skills **SSR 13** - Relational and psychopedagogical skills
KA7 - Organization and implementation of targeted activities and pathways, management of learning progression	**SSR 1** - Project management Skills **SSR 2** - Information finding and analysis skills **SSR 2** - Information finding and analysis skills **SSR 4** - Ability to use 360° cameras for the creation of useful content for immersive teaching purposes **SSR 5** - ICT and all new technologies skills **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes **SSR 7** - Ability to create and print Marker **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application **SSR 12** - Pedagogical skills
KA8 - Monitoring, verification and evaluation of the results achieved by students	**SSR 1** - Project management Skills **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training **SSR 12** - Pedagogical skills **SSR 13** - Relational and psychopedagogical skills
KA9 - Drafting final evaluation of students	**SSR 2** - Information finding and analysis skills **SSR 5** - ICT and all new technologies skills **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training
KA10 - Information and involvement of parents	**SSR 1** - Project management Skills **SSR 11** - Management skills of the discipline and communication within the virtual classrooms

	SSR 12 - Pedagogical skills **SSR 13** - Relational and psychopedagogical skills

3.1.4 Matrix for transversal skills required associated to perform the key activities

Key Activity	Associated transversal skills
KA1 - Definition of the studies program and of the educational path of the students: needs analysis	**TSR 1** - Teamwork/cooperation **TSR 3** - Problem solving e team working **TSR 5** - Customer focus **TSR 6** - Ability to cope with stress **TSR 8** - Ability to work independently **TSR 12** - Ability to build, manage and support relationships with people in training
KA2 - Definition of objectives to be achieved for students	**TSR 4** - Ability to motivate and inspire clients **TSR 5** - Customer focus **TSR 7** - Empathy and active listening
KA3 - Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	**TSR 5** - Customer focus **TSR 8** - Ability to work independently **TSR 10** - Innovativeness / creativity
KA4 - Selection of tools and devices needed for digital and immersive teaching	**TSR 2** - Flexibility and adaptability **TSR 10** - Innovativeness / creativity
KA5 - Transfer of know-how to students for the correct use of digital and immersive learning tools	**TSR 2** - Flexibility and adaptability **TSR 6** - Ability to cope with stress **TSR 8** - Ability to work independently **TSR 10** - Innovativeness / creativity **TSR 11** - Verbal and non-verbal communication skills
KA6 - Involve students in the learning process	**TSR 4** - Ability to motivate and inspire clients **TSR 5** - Customer focus **TSR 7** - Empathy and active listening **TSR 9** - Trust building ability/ reliability **TSR 11** - Verbal and non-verbal communication skills **TSR 12** - Ability to build, manage and support relationships with people in training
KA7 - Organization and implementation of targeted activities and pathways, management of learning progression	**TSR 1** - Teamwork/cooperation **TSR 2** - Flexibility and adaptability **TSR 3** - Problem solving e team working

	TSR 5 - Customer focus **TSR 6** - Ability to cope with stress **TSR 7** - Empathy and active listening **TSR 10** - Innovativeness / creativity **TSR 11** - Verbal and non-verbal communication skills
KA8 - Monitoring, verification and evaluation of the results achieved by students	**TSR 4** - Ability to motivate and inspire clients **TSR 6** - Ability to cope with stress **TSR 11** - Verbal and non-verbal communication skills
KA9 - Drafting final evaluation of students	**TSR 5** - Customer focus **TSR 9** - Trust building ability/ reliability
KA10 - Information and involvement of parents	**TSR 3** - Problem solving e team working **TSR 6** - Ability to cope with stress **TSR 11** - Verbal and non-verbal communication skills **TSR 12** - Ability to build, manage and support relationships with people in training

4 CONCLUSIONS

4.1 Final Analysis Matrix Description

Now, we can create the final Analysis Matrix Description, by considering:

- The different cluster of key activities individuated (less considered, moderately considered and heavily considered)
- The weight of each key activity
- The weight of each knowledge requested for each key activity
- The weight of each specific skill requested for each key activity
- The weight of each transversal skill requested for each key activity

Then, we can create the final Matrix, according to the following template:

UNIT	CATEGORICAL ANALYSIS	Key Activities	Average WpKA	SPECIFIC SKILLS (SK) (associated)	KNOWLEDGES (K) (associated)	TRANSVERSAL SKILLS (TS) (associated)
UNIT 1	*Key-activities (KA) heavily considered*	KA 1 KA 5 KA n	.... Sum of the heavily WpKAs	SK 7 SK 9 SK n	K 7 K 9 K 11	TK 3 TK 4 TK n
	Key-activities moderately considered	KA 3 KA 6 KA n	.... Sum of the moderately WpKAs	SK 2 SK 5 SK n	K 2 K 5 K 13	TK 2 TK 7 TK n
	Key-activities less considered	KA 4 KA11	.... Sum of the less WpKAs Cluster sum of WpKAs	SK 1 SK 17	K 1 K 17	TK 4 TK 11
Additional Information	RELATIVE WEIGHT OF THE UNIT ON THE OVERALL WEIGHT OF LEARNING OUTCOMES	XX,XX %				

The orange box dashed left in the sample matrix should show the average of the WpKA points, already given in the first section of this report.

4.2 Competences profile of the Expert in digital and immersive teaching for vocational training

According to the matrixes described in previews paragraphs, we are now able to create **4 groups of Key Activities/ Units** that represent the main Activity Phases that involve a VET teacher.

Activity Phase/ Unit	Key Acvities associated	WpKA
1 – Planning of digital VET Teaching process	KA 4 - Selection of tools and devices needed for digital and immersive teaching	15,20
	KA 2 - Definition of objectives to be achieved for students	13,74
	KA 1 - Definition of the studies program and of the educational path of the students: needs analysis	13,10
	TOTAL WpKA Activity Phase/Unit 1	**42,04**
2 – Implementation of digital VET Teaching process	KA 3 - Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	14,33
	KA 7 - Organization and implementation of targeted activities and pathways, management of learning progression	13,44
	KA 5 - Transfer of know-how to students for the correct use of digital and immersive learning tools	12,74

	TOTAL WpKA Activity Phase/Unit 2	**40,51**
3 – Evaluation of digital VET Teaching process	KA 8 – Monitoring, verification and evaluation of the results achieved by students KA 9 - Drafting final evaluation of students	12,44 11,18
	TOTAL WpKA Activity Phase/Unit 3	**23,62**
4 – Involvment of students and parents in digital VET Teaching process	KA 6 - Involve students in the learning process KA 10 - Information and involvement of parents	14,33 9,52
	TOTAL WpKA Activity Phase/Unit 3	**23,85**
	TOTAL WpKA	**130,02**

To have a better understanding of successive operations to do, we give an exemple of the procedure proposed to accomplish such correspondence that will be calculated by a simple formula.

RELATIVE WEIGHT OF THE UNIT

Total WpKA = 130,02

Total WpKA Unit 1= (42,04 * 100)/ 130,02= 32,33%

Total WpKA Unit 2= (40,51 * 100)/ 130,02= 31,16%

Total WpKA Unit 3= (23,62 * 100)/ 130,02= 18,17%

Total WpKA Unit 4= (23,85 * 100)/ 130,02= 18,34%

If we consider for the e-learning course 60 hours, we can suppose the following module structure:

Unit 1 / Module 1 = 60 hours x 32,33% = 19,4

Unit 2 / Module 2 = 60 hours x 31,16% = 18,7

Unit 3 / Module 3 = 60 hours x 18,17% = 10,9

Unit 4 / Module 4 = 60 hours x 18,34% = 11,00

In order to transform the individuated Activity Phases in Learning Units, now we have only to connect to all Key Activities of each Phase, the associated Knowledge, Specific and Transversal Skills.

So, in the following table we show the **complete overview of the Training program for the Expert in digital and immersive teaching for vocational training.**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
1 – Planning of digital VET Teaching process	Key Activities heavily considerated	None was found	/	/	/	/
	Key Activities moderately considerated	**KA4** - Selection of tools and devices needed for digital and immersive teaching	15,20	**KnR 9** - Knowledge of innovative learning environments – 16,50 **KnR 4** - Knowledge of the techniques used for digital teaching – 15,434 **KnR 3** - Knowledge of digital tools useful for the use of these technologies – 15,418 **KnR 2** - Knowledge of	**SSR 5** - ICT and all new technologies skills – 15,84 **SSR 3** - Ability to use PC/tablet/smartphone for digital and immersive teaching – 15,03 **SSR 4** - Ability to use 360° cameras for the creation of useful content for immersive teaching purposes – 14,19 **SSR 7** - Ability to create	**TSR 2** - Flexibility and adaptability – 15,84 **TSR 10** - Innovativeness / creativity – 15,35

				cardboard and viewers, their use and the difference between these tools – 14,696 **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages) – 13,45	and print Marker – 12,06	
		KA2 - Definition of objectives to be achieved for students	13,74	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 7** - Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) -13,678 **KnR 10** - Cognitive and coordination, design and	**SSR 13** - Relational and psychopedagogical skills – 16,68 **SSR 12** - Pedagogical skills – 14,17 **SSR 2** - Information finding and analysis skills – 12,76 **SSR 1** - Project management Skills – 10,97	**TSR 4** - Ability to motivate and inspire clients – 16,47 **TSR 7** - Empathy and active listening – 14,58 **TSR 5** - Customer focus – 13,96

				management knowledges – 10,842		
		KA1 - Definition of the studies program and of the educational path of the students: needs analysis	13,10	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 7** - Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) – 13,678 **KnR 6** - Knowledge of teaching subjects – 13,588 **KnR 10** - Cognitive and coordination, design and management knowledges – 10,842	**SSR 12** - Pedagogical skills – 14,17 **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training – 13,81 **SSR 2** - Information finding and analysis skills – 12,76 **SSR 1** - Project management Skills – 10,97	**TSR 6** - Ability to cope with stress – 15,67 **TSR 3** - Problem solving e team working – 15,59 **TSR 12** - Ability to build, manage and support relationships with people in training – 15,09 **TSR 1** - Teamwork/cooperation – 14,20 **TSR 5** - Customer focus – 13,96 **TSR 8** - Ability to work independently – 13,54
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	42,04				

	Sum of the less WpKAs =	0				
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE				**32,33%**	
UNIT	**CATEGORICAL ANALYSIS**	**KEY ACTIVITY**	**WpKA**	**Knowledge associated - WpKnR points**	**Specific Skills Associated - WpSSR points**	**Transversal Skills Associated - WpTSR points**
2 – Implementation of digital VET Teaching Process	Key Activities heavily considerated	None was found		/	/	/
	Key Activities moderately considerated	**KA3** - Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	14,33	**KnR 4** - Knowledge of the techniques used for digital teaching – 15,434 **KnR 3** - Knowledge of digital tools useful for the use of these technologies – 15,418 **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages) – 13,45 **KnR 8** - Knowledge of foreign languages – 11,928	**SSR 5** - ICT and all new technologies skills – 15,84 **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer – 15,43 **SSR 2** - Information finding and analysis skills – 12,76 **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes – 11,77	**TSR 10** - Innovativeness / creativity – 15,35 **TSR 5** - Customer focus – 13,96 **TSR 8** - Ability to work independently – 13,54

				KnR 10 - Cognitive and coordination, design and management knowledges – 10,842		
		KA7 - Organization and implementation of targeted activities and pathways, management of learning progression	13,44	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 7** - Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) – 13,678	**SSR 5** - ICT and all new technologies skills – 15,84 **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer – 15,43 **SSR 4** - Ability to use 360° cameras for the creation of useful content for immersive teaching purposes – 14,19 **SSR 12** - Pedagogical skills – 14,17 **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of	**TSR 2** - Flexibility and adaptability – 15,84 **TSR 6** - Ability to cope with stress – 15,67 **TSR 3** - Problem solving e team working – 15,59 **TSR 10** - Innovativeness / creativity – 15,35 **TSR 11** - Verbal and non-verbal communication skills – 15,04 **TSR 7** - Empathy and active listening – 14,58 **TSR 1** - Teamwork/cooperation – 14,20 **TSR 5** - Customer focus – 13,96

					the Application – 13,09 **SSR 2** - Information finding and analysis skills – 12,76 **SSR 7** - Ability to create and print Marker – 12,06 **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes – 11,77 **SSR 1** - Project management Skills – 10,97	
		KA5 - Transfer of know-how to students for the correct use of digital and immersive learning tools	12,74	**KnR 9** - Knowledge of innovative learning environments – 16,50 **KnR 4** - Knowledge of the techniques used for digital teaching – 15,434 **KnR 3** - Knowledge of digital tools useful for the use of these technologies – 15,418 **KnR 2** - Knowledge of cardboard and viewers, their use and the difference	**SSR 5** - ICT and all new technologies skills – 15,84 **SSR 8** - Ability to use innovative and immersive teaching techniques for knowledge transfer – 15,43 **SSR 4** - Ability to use 360° cameras for the	**TSR 2** - Flexibility and adaptability – 15,84 **TSR 6** - Ability to cope with stress – 15,67 **TSR 10** - Innovativeness / creativity – 15,35 **TSR 11** - Verbal and non-verbal communication skills – 15,04 **TSR 8** - Ability to work independently – 13,54

				between these tools – 14,696 **KnR 5** - Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages) – 13,45 **KnR 8** - Knowledge of foreign languages – 11,928 **KnR 10** - Cognitive and coordination, design and management knowledges – 10,842	creation of useful content for immersive teaching purposes – 14,19 **SSR 2** - Information finding and analysis skills – 12,76 **SSR 7** - Ability to create and print Marker – 12,06 **SSR 6** - Ability to use Power Point or similar tools to create slides for teaching purposes – 11,77	
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	40,51				
	Sum of the less WpKAs =	0				
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE					**31,16%**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
3 – Evaluation of digital VET Teaching process	Key Activities heavily considerated	None was found	/	/	/	/
	Key Activities moderately considerated	**KA8** - Monitoring, verification and evaluation of the results achieved by students	12,44	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 7** - Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) – 13,678 **KnR 6** - Knowledge of teaching subjects – 13,588	**SSR 13** - Relational and psychopedagogical skills – 16,68 **SSR 12** - Pedagogical skills – 14,17 **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training – 13,81 **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application – 13,09 **SSR 1** - Project management Skills –	**TSR 4** - Ability to motivate and inspire clients – 16,47 **TSR 6** - Ability to cope with stress – 15,67 **TSR 11** - Verbal and non-verbal communication skills – 15,04

					10,97	
		KA9 - Drafting final evaluation of students	11,18	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 7** - Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills) – 13,678 **KnR 6** - Knowledge of teaching subjects – 13,588	**SSR 5** - ICT and all new technologies skills – 15,84 **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training – 13,81 **SSR 9** - Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application – 13,09 **SSR 2** - Information finding and analysis skills – 12,76	**TSR 9** - Trust building ability/ reliability – 14,06 **TSR 5** - Customer focus – 13,96
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	23,62				

	Sum of the less WpKAs =	0	
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE		**18,17%**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
4 – Involvement of students and parents in digital VET Teaching process	Key Activities heavily considerated	None was found	/	/	/	/
	Key Activities moderately considerated	**KA6** - Involve students in the learning process	14,33	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention – 14,626 **KnR 10** - Cognitive and coordination, design and management knowledges – 10,842	**SSR 13** - Relational and psychopedagogical skills – 16,68 **SSR 12** - Pedagogical skills – 14,17 **SSR 10** - Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training – 13,81 **SSR 11** - Management skills of the discipline and communication within the virtual classrooms – 13,26	**TSR 4** - Ability to motivate and inspire clients – 16,47 **TSR 12** - Ability to build, manage and support relationships with people in training – 15,09 **TSR 11** - Verbal and non-verbal communication skills – 15,04 **TSR 7** - Empathy and active listening – 14,58 **TSR 9** - Trust building ability/ reliability – 14,06 **TSR 5** - Customer focus – 13,96
		KA10 - Information and involvement of parents	9,52	**KnR 11** - Basic pedagogical knowleges, such as the ability to master situations, activate methodologies,	**SSR 13** - Relational and psychopedagogical skills – 16,68	**TSR 6** - Ability to cope with stress – 15,67 **TSR 3** - Problem solving e

				develop projects consistent with the educational intervention – 14,626 **KnR 10** - Cognitive and coordination, design and management knowledges – 10,842	**SSR 12** - Pedagogical skills – 14,17 **SSR 11** - Management skills of the discipline and communication within the virtual classrooms – 13,26 **SSR 1** - Project management Skills – 10,97	team working – 15,59 **TSR 12** - Ability to build, manage and support relationships with people in training – 15,09 **TSR 11** - Verbal and non-verbal communication skills – 15,04
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	23,85				
	Sum of the less WpKAs =	0				
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE					**18,34%**

5 ANNEX N. 1: QUESTIONNAIRE

JOB ANALYSIS QUESTIONNAIRE OF THE EXPERT IN DIGITAL AND IMMERSIVE TEACHING FOR VOCATIONAL TRAINING

ANNEX A

PROJECT NUMBER 2019-1-PL01-KA202-065064

JOB ANALYSIS QUESTIONNAIRE OF THE EXPERT IN DIGITAL AND IMMERSIVE TEACHING FOR VOCATIONAL TRAINING

Instructions

The purpose of this questionnaire is to gather information about a position and its competences, activities and educational/experience requirements of the VET trainers/teachers who use the digital and immersive teaching.

Responses must accurately represent the way the position is currently functioning.

Please pay attention for completing correctly the following questionnaire.

1. Be objective and accurate in your answers. Consider your normal day-to-day responsibilities and activities.
2. Describe the daily work position as it is being performed today, not as it might be in the future or as you think it should be.
3. All questions must be answered completely. An explanation must accompany any question that is determined to be non-applicable.

JOB ANALYSIS AND TRAINING NEED ANALISYS OF THE EXPERT IN DIGITAL AND IMMERSIVE TEACHING FOR VOCATIONAL TRAINING

Practitioner Position Identification

1. Current Position of the teacher/trainer:
2. Level of studies: (before the administration each partner complete this item with multiple choices according to the national educational system) a) b) ….. other:_____
3. Indicate how long you have been using digital and immersive teaching :
4. How many hours per week do you work with students?
5. Did you get any relevant trainings in the field of digital and immersive teaching? (yes/No) If yes, what kind of training? _____

Key Activities Required

Analyze the key activities required for the **USE OF DIGITAL AND IMMERSIVE TEACHING** listed below through your professional occupation.

1. Indicate the importance and difficulty perception associated, on a scale of 1 to 5 (when 1 is the lowest level of importance or difficulty and 5 is the highest level respectively).

For Example:

#	Sample Activities required	Importance Level associated (1 to 5)	Difficulty Level associated (1 to 5)
1	Definition of the studies program and of the educational path of the students: needs analysis	4	3
2	Definition of objectives to be achieved for students	5	5
3	Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes	3	4
4	Selection of tools and devices needed for digital and immersive teaching	0	0
5	Transfer of know-how to students for the correct use of digital and immersive learning tools	5	2
6	Involve students in the learning process	5	2
7	Organization and implementation of targeted activities and pathways, management of learning progression	5	3

About your Key-Activities listed below – fill in the importance as well the difficulty level associated (when 1 is the lowest level of importance or difficulty and 5 is the highest level respectively)

#	Activities Required	Importance Level associated (1 to 5)	Difficulty Level associated (1 to 5)
1.	Definition of the studies program and of the educational path of the students: needs analysis		
2.	Definition of objectives to be achieved for students		
3.	Didactic-methodological design: preparation of video lessons and related exercises for immersive learning purposes		
4.	Selection of tools and devices needed for digital and immersive teaching		
5.	Transfer of know-how to students for the correct use of digital and immersive learning tools		
6.	Involve students in the learning process		
7.	Organization and implementation of targeted activities and pathways, management of learning progression		
8.	Monitoring, verification and evaluation of the results achieved by students		
9.	Drafting final evaluation of students		
10.	Information and involvement of parents		
11.	Other (Specify) _____		

Knowledge

Analyze the **KNOWLEDGE** that you regularly used to perform your key activities at your position. Through the different types of knowledge listed below, fill in the importance, the difficulty and the training need levels associated (when 1 is the lowest level of importance or difficulty, and 5 is the highest level respectively)

#	Knowledge Required	Importance Level associated (1 to 5)	Difficulty Level associated (1 to 5)	Training need Level associated (1 to 5)
1.	Knowledge of augmented reality, virtual reality and mixed reality and the difference between technologies (innovative teaching methodologies)			
2.	Knowledge of cardboard and viewers, their use and the difference between these tools			
3.	Knowledge of digital tools useful for the use of these technologies			
4.	Knowledge of the techniques used for digital teaching			
5.	Knowledge of the tools for the creation of useful material for teaching and lessons (360° video cameras, Power Point, e-learning and scorm packages).			
6.	Knowledge of teaching subjects (disciplinary knowledge)			
7.	Knowledge of tools for the evaluation of technical skills (hard skills) and transversal skills (soft skills).			
8.	Knowledge of foreign languages (at least English language)			
9.	Knowledge of innovative learning environments			
10.	Cognitive and coordination, design and management knowledges			
11.	Basic pedagogical knowleges, such as the ability to master situations, activate methodologies, develop projects consistent with the educational intervention			

	OTHERS KNOWLEDGES THAT YOU CONSIDER RELEVANT AND WAS NOT MENTIONED			
12.				
13.				
14.				

Specific Skills

Analyze the **SPECIFIC SKILLS** that you regularly need to perform in your key activities at your position. Through the different types of Specific Skills listed below listed below, fill in the importance, the difficulty and the training need levels associated (when 1 is the lowest level of importance or difficulty, and 5 is the highest level respectively).

#	Specific Skills Required	Importance Level associated (1 to 5)	Difficulty Level associated (1 to 5)	Training need Level associated (1 to 5)
1.	Project management Skills			
2.	Information finding and analysis skills			
3.	Ability to use PC/tablet/smartphone for digital and immersive teaching			
4.	Ability to use 360° cameras for the creation of useful content for immersive teaching purposes			
5.	ICT and all new technologies skills			
6.	Ability to use Power Point or similar tools to create slides for teaching purposes			
7.	Ability to create and print Marker			
8.	Ability to use innovative and immersive teaching techniques for knowledge transfer			
9.	Ability to collect and analyze analytics, i.e. to perform analysis activities on statistics in order to evaluate the redemption on the use of the Application			
10.	Ability to use evaluation and monitoring techniques in order to understand needs and difficulties of students after immersive training			
11.	Management skills of the discipline and communication within the virtual classrooms			
12.	Pedagogical skills			
13.	Relational and psychopedagogical skills (necessary to enter into a relationship with the students, to achieve a positive didactic communication, a fruitful educational relationship, to recognize the problems typical of the various age phases, the dynamics and conflicts that arise within the "virtual" class between students or between student and teacher, to recognize problems and know how to manage them)			
	OTHERS SPECIFIC SKILLS THAT YOU CONSIDER RELEVANT AND WAS NOT MENTIONED			
14.				
15.				
16.				

Transversal Skills (Attitudes and Behaviors)

Describe the **TRANSVERSAL SKILLS** that you regularly used to perform your key activities at your position. Through the different types of transversal skills listed below listed below, fill in the importance,

the difficulty and the training need levels associated, (when 1 is the lowest level of importance or difficulty, and 5 is the highest level respectively)

#	Transversal Skills Required	Importance Level associated (1 to 5)	Difficulty Level associated (1 to 5)	Training need Level associated (1 to 5)
1.	Teamwork/cooperation			
2.	Flexibility and adaptability			
3.	Problem solving e team working			
4.	Ability to motivate and inspire clients			
5.	Customer focus			
6.	Ability to cope with stress			
7.	Empathy and active listening			
8.	Ability to work independently			
9.	Trust building ability/ reliability			
10.	Innovativeness / creativity			
11.	Verbal and non-verbal communication skills			
12.	Ability to build, manage and support relationships with people in training			
	OTHERS TRANSVERSAL SKILLS THAT YOU CONSIDER RELEVANT AND WAS NOT MENTIONED			
13.				
14.				
15.				

Equipment, tools and materials used

List below the equipment, tools and materials that in your position you use

#	Type	YES	NO
1.1	Internet		
1.2	PC, tablet o smartphone		
1.3	Visors or cardboard for the use of VR material		
1.4	Electronic register to manage organizational and educational commitments		
1.5	Platform/App for delivery of lessons and content that meets security requirements		
1.6	Other (Specify) _____		
1.7			
1.8			
1.9			
1.10			

Outputs and Results Associated with your Key-Activities

List below the output and results you produce in your daily work with students

#	Type of output/result	YES	NO
1.1	Slide		
1.2	Video lessons		
1.3	Balance sheet performance virtual class		
1.4	Student and teacher/trainer evaluation report		
1.5	Other (Specify) _____		
1.6			
1.7			
1.8			
1.9			
1.10			

Organizational Supervision

Do you get supervision? Yes/No _____

6 ANNEX N. 2: PARTNERS ELABORATION TOOLS