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IN.HAPTIC VET

INCLUSIVE EDUCATION IN ACTION: COGNITIVE-HAPTIC LEARNING IN THE VET PROJECT SYSTEM

PR3: COMPETENCE PROFILE OF THE ”VET IN.HAPTIC EXPERT”

University of Humanities and Economics in Lodz
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INTRODUCTION

This project result, henceforth designated PR3, wants to describe the analysis conducted in each Partner country among the VET Trainers and Teachers on the use of pedagogical models and cognitive learning strategies based on tactile experience for students with sensory disalbilities and learning disorders, with the aim to describe the key activities (unit of competence) and the learning 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 pedagogical models based on tactile experience, based, in part, on the partner data reports, and, on the other hand, with a particular set of statistical tests realized by the responsible partner in the third section of this report.

But in particular, this document (PR3) 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 illustrate the purpose of profile analysis carried out; 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 links among the different labor actions that characterize the work of the expert who creates inclusive educational pathways using pedagogical models based on tactile experiences in order to develop one or more professional skills.

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 inclusive haptics vocational education and training, with the description of ideal characteristics profile.

Of course this PR3, with the PR1 and PR2, ends with the completion of the entire collective effort of the partnership, reviewing all points and establish itself as the input to the *Project Result 4 – Training Program for VET In.Haptic Expert and Project Result 5 – Competence validation tool of the VET In.Haptic Expert*

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 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 PR3 outcomes, 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 is also possible to understand the training level of the Teacher/Trainer 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 a Teacher/Trainer 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 result, associated costs and ensure a certain quality to the required outcomes, we used a **questionnaire created as a Method of Data Collection for this PR3**, 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 PR3.

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 PR3 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 PR3, 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 PR3, 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 PR3, we leave here exposed on the following table (Table 1), an informative summary on the fundamental characteristics on which will be held this project result.

Table 1. Information summary about the fundamental characteristics for PR3 achievement

SUMMARY OF INFORMATION ON THE MAIN CHARACTERISTICS FOR CARRYING OUT THE PR3	
Purpose profile analysis of the expert	Description of key activities of expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (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 PR3 (which is attached – Annex A) 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 VET Teachers and Trainers 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 VET In.Haptic Expert.

SECTION	TRAINING NEED ANALYSIS	JOB ANALYSIS
SECTION A **Teacher/Trainer 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 Teachers/Trainers, with the indication of importance level, difficulty level and training need level associated.

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

Section E refers the analysis of **Transversal Skills** required to the Teachers/Trainers, 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 PR3, 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	Qualitative

			used	
		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 PR3, it was established the procedures to be implemented the administration of questionnaire by each partner (Annex A, 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 Teachers/Trainers - or the on line surveys software (tool in the version of their mother tongue) or email, with at least 30 VET teachers and trainers working with students with sensory disabilities and learning disorders.

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 PR3 for this purpose;

II. The Elaboration tool of each partner in relation to the administration of the Annex A, should be performed in excel file and should be delivered to the partner responsible for PR3 in electronic format and in English, containing the following filled section:

- SECTION A. Teacher/Trainer 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 PR3 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 working with students with sensory disabilities and learning disorders
- the numbers of hours per week they work with students
- their relevant trainings in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders

In the following tables, we summarize the samples of Teachers/Trainers involved in each Partner Country.

Polish Sample

Position	Valid Percent
Teacher	83,33%
Special needs teacher	16,67%
Total	**100%**

Level of studies	Valid Percent
Degree	93,33%
Phd	6,67%
Total	**100%**

Lenght of Time	Valid Percent
1 - 5 years	16,67%
6 - 10 years	30,00%
11 - 15 years	23,33%
16 - 20 years	23,33%
21 - 25 years	6,67%
Total	**100%**

Hours per week	Valid Percent
1 – 5	0,00%
6 - 10	16,67%
11 - 20	80,00%
40	3,33%
Total	**100%**

Trainings	Valid Percent
NO	43,33%
YES	56,67%
Total	**100%**

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

- The total number of Teachers/Trainers 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 people are **Teachers** (83,33%).
- Concerning the Lenght of Time working with students with sensory disabilities and learning disorders, the most part of involved teachers declare that they are working with students with sensory disabilities and learning disorders from **6 - 10 years** (30,00%).
- Concerning the weekly time spent working with students, the most part of involved Teachers works **11 - 20 hours per week** with students (80,00%), so it averages that they spend full part of all their working time with students.
- Finally, just over half of involved teachers declared that **they did trainings** in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (56,67%). If we read the responses of those who claimed to have done training, we notice that they especially attended training concerning courses and seminars.

Italian Sample

Position	Valid Percent
Teacher	80,00%
Special needs teacher	20,00%
Total	**100%**

Hours per week	Valid Percent
1 – 5	20,00%
6 - 10	13,33%
11 - 20	66,67%
Total	**100%**

Level of studies	Valid Percent
Master's Degree	100,00%
Total	**100%**

Trainings	Valid Percent
NO	50,00%
YES	50,00%
Total	**100%**

Lenght of Time	Valid Percent
1 - 5 years	33,33%
6 - 10 years	46,67%
11 - 15 years	10,00%
16 - 20 years	10,00%
Total	**100%**

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

- The total number of Teachers/Trainers 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 people are **Teachers** (80,00%).
- Concerning the Lenght of Time working with students with sensory disabilities and learning disorders, the most part of involved teachers declare that they are working with students with sensory disabilities and learning disorders from **6 - 10 years** (46,67%).
- Concerning the weekly time spent working with students, the most part of involved Teachers works **11 - 20 hours per week** with students (66,67%), so it averages that they spend half part or full part of all their working time with students.
- Finally, half part of involved Teachers declared that **they didn't trainings** in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (**50,00%).** The remaining 50,00% of teacher trainings in this field and if we read their answers, we notice that they especially attended training courses and courses at the University.

Portuguese Sample

Position	Valid Percent
Trainer	40,00%
Teacher	33,34%
No answer	23,33%
Unemployed	3,33%
Total	**100%**

Hours per week	Valid Percent
1 - 10	30,00%
11 - 20	26,67%
21 - 30	30,00%
31 - 40	6,67%
No answer	6,66%
Total	**100%**

Level of studies	Valid Percent
Degree	70,00%
Graduate Degree	3,33%
12th year	10,00%
Master	3,33%
No answer	13,33%
Total	**100%**

Trainings	Valid Percent
YES	6,67%
NO	83,33%
No answer	10,00%
Total	**100%**

Lenght of Time	Valid Percent
0 - 5 years	30,00%
6 - 10 years	33,33%
11 - 15 years	23,33%
16 - 21 years	6,67%
No answer	6,67%
Total	**100%**

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

- The total number of teachers inolved in the survey are **30**.
- Concerning the job position, a lot of involved people are **Trainers and Teachers** (73,34%)
- Concerning the Lenght of Time working with students with sensory disabilities and learning disorders, the most part of involved teachers declare that they are working with students with sensory disabilities and learning disorders from **0 - 5 years** (30,00%) and **6 - 10 years** (33,33%)
- Concerning the weekly time spent working with students, the most part of involved Teachers works **1 - 10 hours per week** with students (30,00%) **or 21 - 30 hours per week**, so it averages that they spend half part or full part of all their working time with students.
- Finally most of involved teachers declared that **they didn't trainings** in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (83,33%).

Spanish Sample

Position	Valid Percent
Teacher	76,67%
No answer	23,33%
Total	**100%**

Level of studies	Valid Percent
Graduate degree	86,67%
Master's degree	3,33%
No answer	10,00%
Total	**100%**

Lenght of Time	Valid Percent
1 - 5 years	56,67%
6 - 10 years	40,00%
11 - 15 years	3,33%
Total	**100%**

Hours per week	Valid Percent
1 - 10	63,33%
11 - 20	23,33%
21 - 30	13,33%
Total	**100%**

Trainings	Valid Percent
YES	10,00%
NO	90,00%
Total	**100%**

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

- The total number of teachers inolved in the survey are **30**.
- Concerning the job position, most of involved people are **Teachers** (76,67%)
- Concerning the Lenght of Time working with students with sensory disabilities and learning disorders, the most part of involved teachers declare that they are working with students with sensory disabilities and learning disorders from **1 - 5 years** (56,67%) and **6 - 10 years** (40%).
- Concerning the weekly time spent working with students, the most part of involved Teachers works **1 - 10 hours per week** with students (63,33%), so it averages that they spend half part of all their working time with students.
- Finally most of involved teachers declared that **they didn't trainings** in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (90,00%).

Greek Sample

Position	Valid Percent
Teachers	60,00%
VET educator	6,67%
Associate professor in Higer Education	3,33%
No answer	30,00%
Total	**100%**

Hours per week	Valid Percent
1 - 10	23,33%
11 – 20	10,00%
21 - 30	66,67%
Total	**100%**

Level of studies	Valid Percent
Graduate degree	30,00%
Master's degree	63,33%
PhD	3,33%
No answer	3,33%
Total	**100%**

Trainings	Valid Percent
NO	50,00%
YES	50,00%
Total	**100%**

Lenght of Time	Valid Percent
1 - 5 years	50,00%
6 - 10 years	20,00%
11 - 15 years	13,33%
16 - 20 years	13,33%
23 years	3,33%
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 **Teachers** (60,00%)
- Concerning the Lenght of Time working with students with sensory disabilities and learning disorders, the most part of involved teachers declare that they are working with students with sensory disabilities and learning disorders from **1 - 5 years** (50,00%)
- Concerning the weekly time spent working with students, the most part of involved teachers works **21 - 30 hours per week**, so it averages that they spend full part of all their working time with students.
- Finally, half part of involved Teachers declared that **they didn't trainings** in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (**50,00%).** The remaining 50,00% of teachers trainings in this field and if we read their answers, we notice that they have **Master's degree or Special Education Certification**.

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 PR3, 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 teachers and trainers.

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	15 + 3 (optional)	Importance Level associated	Difficulty Level associated	Training need Level associated
D	Specific Skills	14 +	Importance	Difficulty	Training

		3 (optional)	Level associated	Level associated	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

2.1 ANALYSIS OF THE PARTNERS CHARTS OF KEY ACTIVITIES, KNOWLEDGE, SPECIFIC AND TRANSVERSAL SKILLS, EQUIPMENT, TOOLS AND MATERIALS USED, OUTPUTS AND RESULTS

In this section, we present the results obtained by each partner thanks to their national surveys conducted among national VET Trainers and Teachers working with students with sensory disabilities and learning disorders. 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 teachers 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 teachers;
  - 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 teachers;
  - 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 teachers

- **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 teachers;
  - 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 teachers;
  - 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 teachers

- **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 teachers;
  - 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 teachers;
  - 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 teachers

- **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 teachers;
- 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 teachers;
- 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 teachers

- **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**).

[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.*

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 pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.
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.

Before the presentation of national reports, we have to precise that the number of involved teachers and trainers is 150 (30 per involved country), as foreseen in the application form.

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

2.1.1 Charts 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/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,4	3	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,5	3	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,47	3	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	4,53	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,2	3	5
Involve students in the learning process	30	4,3	3	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	4,4	2	5

Monitoring, verification and evaluation of the results achieved by students	30	4,63	3	5
Drafting final evaluation of students	30	4,43	3	5
Information and involvement of parents and caregivers	30	4,23	2	5

Avarage Difficulty Level (B_DL)

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

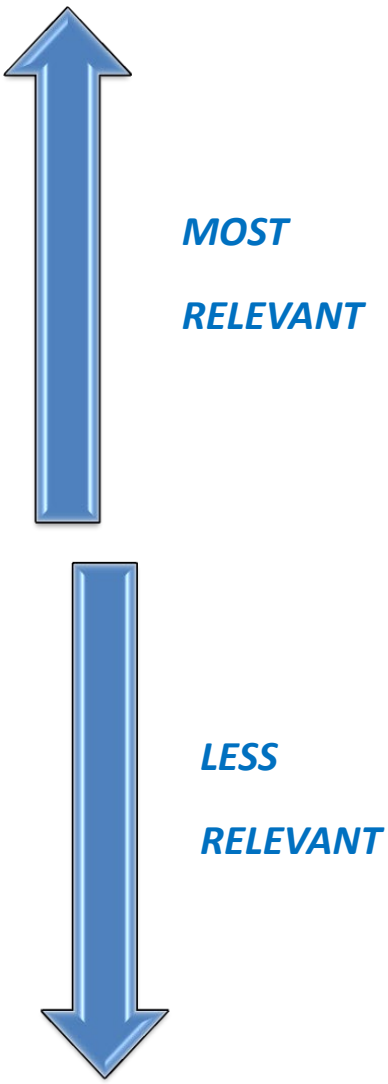
Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,4	3	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,1	3	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,43	3	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	4,33	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,47	3	5
Involve students in the learning	30	4,37	3	5

process				
Organization and implementation of targeted activities and pathways, management of learning progression	30	4,43	3	5
Monitoring, verification and evaluation of the results achieved by students	30	4,3	2	5
Drafting final evaluation of students	30	3,83	1	5
Information and involvement of parents and caregivers	30	4,1	3	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	19,90
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	19,80
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	19,61
Organization and implementation of targeted activities and pathways, management of learning progression	19,49
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	19,36
Involve students in the learning process	18,79
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	18,77
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	18,45
Information and involvement of parents and caregivers	17,34
Drafting final evaluation of students	16,97



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

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

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	4,57	3	5
Knowledge of European and National legislation on school inclusion	30	3,93	1	5
knowledge of the main computer vocabulary	30	3,73	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,53	3	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,17	2	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,17	2	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,17	2	5
Knowledge of the vibrational/tactile actuators of Android devices	30	4,3	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	4,23	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,1	1	5

Knowledge of assistive systems for the visually impaired on Android devices	30	4,3	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,33	2	5
Knowledge of vision simulation systems for the visually impaired	30	4,53	2	5
Knowledge of text to speech and speech input recognition systems	30	4,43	3	5
Cognitive and coordination, design and management knowledge	30	4,17	3	5

Avarage Difficulty Level (C_DL)

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

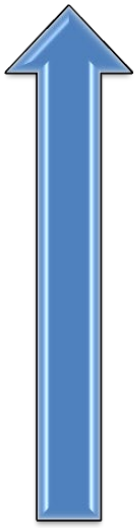
Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,8	1	5
Knowledge of European and National legislation on school inclusion	30	3,87	1	5
knowledge of the main computer vocabulary	30	3,3	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,47	2	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,33	3	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,27	1	5

Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,37	2	5
Knowledge of the vibrational/tactile actuators of Android devices	30	3,9	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	3,9	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,27	1	5
Knowledge of assistive systems for the visually impaired on Android devices	30	4,43	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,43	2	5
Knowledge of vision simulation systems for the visually impaired	30	4,5	2	5
Knowledge of text to speech and speech input recognition systems	30	4,37	2	5
Cognitive and coordination, design and management knowledge	30	3	1	5

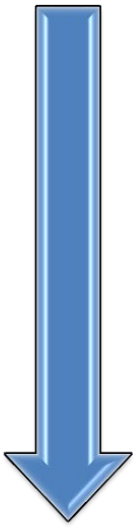
Chart of Weight per Knowledge Required (WpKnR)

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

Knowledge	WpKnR
Knowledge of vision simulation systems for the visually impaired	20,39
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	20,25
Knowledge of text to speech and speech input recognition systems	19,36
Knowledge of assistive systems for the visually impaired on Apple devices	19,18
Knowledge of assistive systems for the visually impaired on Android devices	19,05
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	18,22
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	18,06
Knowledge of techniques for developing tactile skills (Haptic technologies)	17,81
Knowledge of the design tactile interfaces with vibration patterns	17,51
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	17,36
Knowledge of the vibrational/tactile actuators of Android devices	16,77
Knowledge of the vibrational/tactile actuators of Apple devices	16,50



MOST RELEVANT



LESS RELEVANT

Knowledge of European and National legislation on school inclusion	15,21
Cognitive and coordination, design and management knowledge	12,51
knowledge of the main computer vocabulary	12,31

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	4,23	3	5
Information finding and analysis skills	30	4,23	3	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	4,2	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	4,27	2	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,27	2	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,67	4	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,27	3	5

Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,43	2	5
Ability to use vibrational patterns to encode information to transfer	30	4,3	2	5
ICT and all new technologies skills	30	4,07	2	5
Ability to evaluate user feedback from a tactile interaction	30	4,4	2	5
Ability to define user experience using tactile and audio interaction	30	4,23	3	5
Ability to share tactile experiences and lessons in a community	30	4,43	3	5
Pedagogical skills	30	4,9	4	5

Avarage Difficulty Level (D_DL)

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

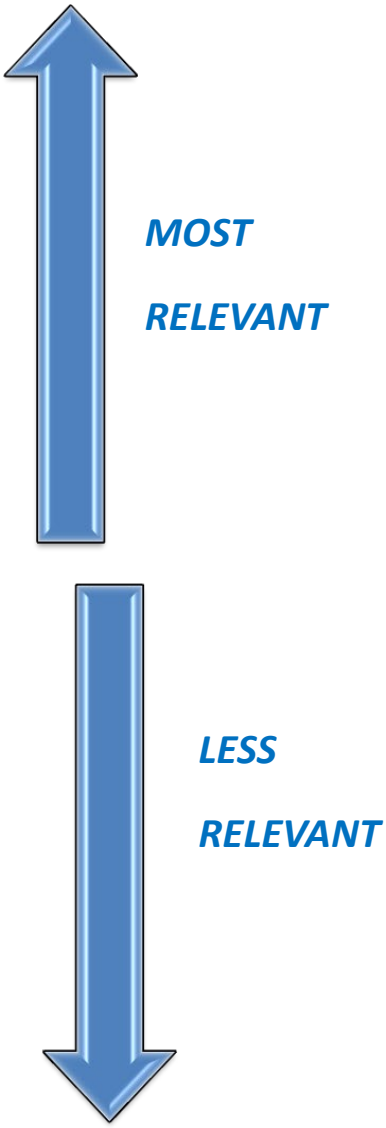
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,63	1	5
Information finding and analysis skills	30	3,6	1	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	4,17	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	4,43	3	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,2	3	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,47	3	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,37	3	5
Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,03	2	5
Ability to use vibrational patterns to encode information to transfer	30	4,23	3	5
ICT and all new technologies skills	30	3,87	2	5
Ability to evaluate user feedback from a tactile interaction	30	4,00	2	5

Ability to define user experience using tactile and audio interaction	30	4,03	1	5
Ability to share tactile experiences and lessons in a community	30	4,57	1	5
Pedagogical skills	30	3,33	1	5

Chart of Weight per Specific Skills Required (WpSSR)

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

Specific Skills	WpSSR
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	20,88
Ability to share tactile experiences and lessons in a community	20,25
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	18,92
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	18,66
Ability to use vibrational patterns to encode information to transfer	18,19
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	17,93
Ability to use PC/tablet/smartphone for haptic teaching/training	17,85
Ability to evaluate user feedback from a	17,60



tactile interaction	
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	17,51
Ability to define user experience using tactile and audio interaction	17,05
Pedagogical skills	16,32
ICT and all new technologies skills	15,75
Project management Skills	15,36
Information finding and analysis skills	15,23

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	4,5	3	5
Flexibility and adaptability	30	4,07	1	5
Problem solving e team working	30	4,27	2	5
Ability to motivate and inspire clients	30	4,37	2	5
Customer focus	30	4,47	3	5
Ability to cope with stress	30	4,40	3	5
Empathy and active listening	30	4,43	3	4
Ability to work independently	30	4,63	2	5
Trust building ability/ reliability	30	4,13	2	5
Innovativeness / creativity	30	4,3	2	5
Verbal and non-verbal communication skills	30	4,67	3	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,57	3	5

Avarage Difficulty Level (E_DL)

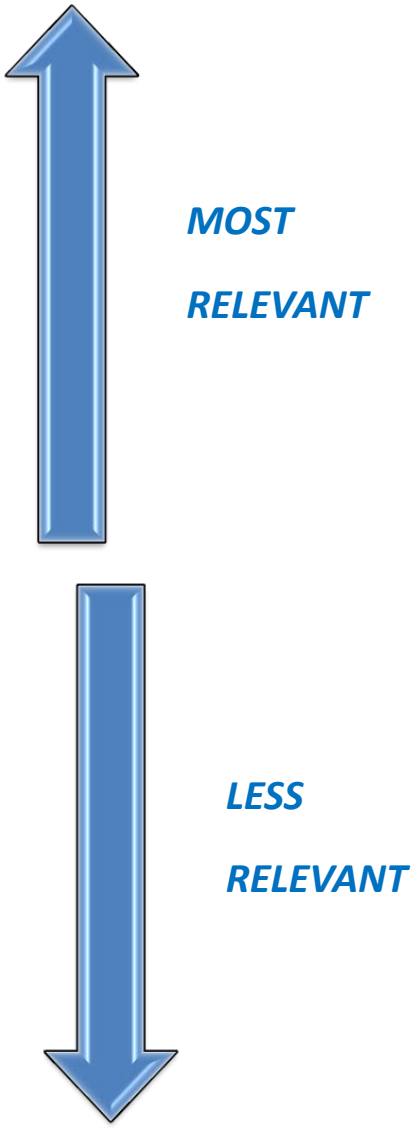
Valid cases = 30; cases with missing value(s) = 0

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,1	3	4
Flexibility and adaptability	30	3,97	2	5
Problem solving e team working	30	4,07	2	5
Ability to motivate and inspire clients	30	3,9	3	5
Customer focus	30	4,03	2	5
Ability to cope with stress	30	4,1	3	5
Empathy and active listening	30	4,3	3	4
Ability to work independently	30	3,17	1	5
Trust building ability/ reliability	30	3,93	2	5
Innovativeness / creativity	30	4,2	3	5
Verbal and non-verbal communication skills	30	4,13	2	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,33	3	5

Chart of Weight per Transversal Skills Required (WpTSR)

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

Transversal skills	WpTSR
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	19,79
Verbal and non-verbal communication skills	19,29
Empathy and active listening	19,05
Teamwork/cooperation	18,45
Innovativeness / creativity	18,06
Ability to cope with stress	18,04
Customer focus	18,01
Problem solving e team working	17,38
Ability to motivate and inspire clients	17,04
Trust building ability/ reliability	16,23
Flexibility and adaptability	16,16
Ability to work independently	14,68



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%
Glasses to simulate visually impaired user	2	6,67%	28	93,33%
Interface to record and track user feedback	2	6,67%	28	93,33%
Platform/App for delivery of lessons and content that meets security requirements	2	6,67%	28	93,33%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide and Guide of usage	23	76,67%	7	23,33%
Video/audio lessons	28	93,33%	2	6,67%
Platform of contents/lessons sharing	23	76,67%	7	23,33%
Student and teacher/trainer evaluation report based on feedbacks on course	29	96,67%	1	3,33%

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

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	10	33,33%	20	66,67%

Comments

According to the results obtained thanks to the **Polish** survey, the competence profile of the VET IN.HAPTIC Expert (expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders) 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 vision simulation systems for the visually impaired	Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	Ability to share tactile experiences and lessons in a community	Verbal and non-verbal communication skills
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	Knowledge of text to speech and speech input recognition systems	Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	Empathy and active listening
Organization and implementation of targeted activities	Knowledge of assistive systems for the visually	Ability to create and manage training contents taking into	Teamwork/cooperation

and pathways, management of learning progression	impaired on Apple devices	account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	Knowledge of assistive systems for the visually impaired on Android devices	Ability to use vibrational patterns to encode information to transfer	Innovativeness / creativity
Involve students in the learning process	Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	Ability to cope with stress
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	Ability to use PC/tablet/smartphone for haptic teaching/training	Customer focus
Definition of objectives to be achieved for students with sensory disabilities and	Knowledge of techniques for developing tactile skills (Haptic technologies)	Ability to evaluate user feedback from a tactile interaction	Problem solving e team working

learning disorders			
Information and involvement of parents and caregivers	Knowledge of the design tactile interfaces with vibration patterns	Ability to create, visualise and manage training contents/materials considering video-audio and touch components	Ability to motivate and inspire clients
Drafting final evaluation of students	Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	Ability to define user experience using tactile and audio interaction	Trust building ability/ reliability
	Knowledge of the vibrational/tactile actuators of Android devices	Pedagogical skills	
	Knowledge of the vibrational/tactile actuators of Apple devices	ICT and all new technologies skills	
	Knowledge of European and National legislation on school inclusion	Project management Skills	
	Cognitive and coordination, design and management knowledge		
	knowledge of the main computer vocabulary	Information finding and analysis skills	Flexibility and adaptability
			Ability to work independently

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

- Student and teacher/trainer evaluation report based on feedbacks on course
- Video/audio lessons
- Slide and Guide of usage
- Platform of contents/lessons sharing

2.1.2 Charts 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/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,90	4	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,93	4	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,87	3	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	4,90	4	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,80	4	5
Involve students in the learning process	30	4,97	4	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	4,97	4	5
Monitoring, verification and	30	4,93	4	5

evaluation of the results achieved by students				
Drafting final evaluation of students	30	4,83	4	5
Information and involvement of parents and caregivers	30	5	5	5

Avarage Difficulty Level (B_DL)

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

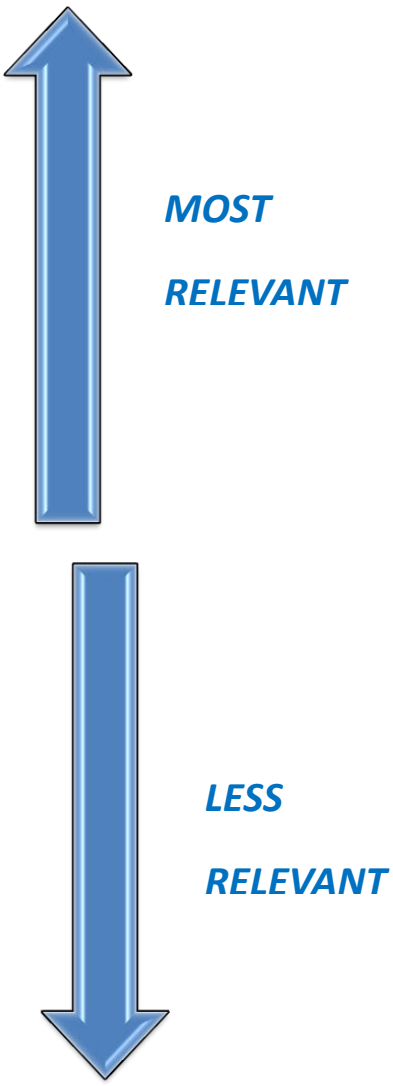
Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	30	3,67	2	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	3,70	2	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,40	3	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	4,67	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,77	4	5
Involve students in the learning process	30	4,20	3	5

Organization and implementation of targeted activities and pathways, management of learning progression	30	3,93	2	5
Monitoring, verification and evaluation of the results achieved by students	30	3,87	2	5
Drafting final evaluation of students	30	3,60	2	5
Information and involvement of parents and caregivers	30	3,60	2	5

Chart of Weight per Key Activity (WpKA)

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

Key Activity	WpKA
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	22,90
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	22,88
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	21,43
Involve students in the learning process	20,87
Organization and implementation of targeted activities and pathways, management of learning progression	19,53
Monitoring, verification and evaluation of the results achieved by students	19,07
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	18,24
Information and involvement of parents and caregivers	18,00
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	17,98
Drafting final evaluation of students	17,39



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

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

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	4,97	4	5
Knowledge of European and National legislation on school inclusion	30	4,1	3	5
knowledge of the main computer vocabulary	30	3,70	2	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,73	4	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,77	4	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,73	4	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,73	4	5
Knowledge of the vibrational/tactile actuators of Android devices	30	4,40	3	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	4,40	3	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,53	3	5

Knowledge of assistive systems for the visually impaired on Android devices	30	4,53	3	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,53	3	5
Knowledge of vision simulation systems for the visually impaired	30	4,80	4	5
Knowledge of text to speech and speech input recognition systems	30	4,67	3	5
Cognitive and coordination, design and management knowledge	30	4,40	3	5

Avarage Difficulty Level (C_DL)

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

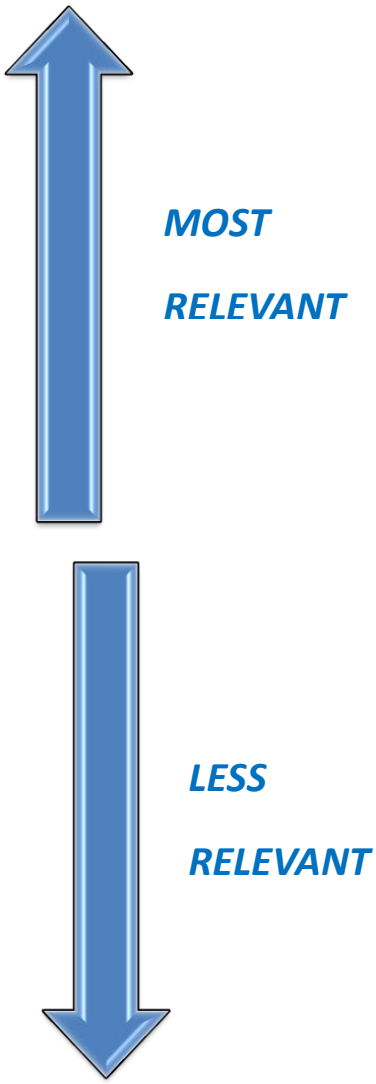
Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,60	2	5
Knowledge of European and National legislation on school inclusion	30	3,07	2	5
knowledge of the main computer vocabulary	30	3,13	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,70	4	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,80	4	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,80	4	5

Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,90	4	5
Knowledge of the vibrational/tactile actuators of Android devices	30	4,77	4	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	4,77	4	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,80	3	5
Knowledge of assistive systems for the visually impaired on Android devices	30	4,63	3	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,63	3	5
Knowledge of vision simulation systems for the visually impaired	30	4,80	3	5
Knowledge of text to speech and speech input recognition systems	30	4,77	3	5
Cognitive and coordination, design and management knowledge	30	2,73	1	5

Chart of Weight per Knowledge Required (WpKnR)

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

Knowledge	WpKnR
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	23,20
Knowledge of vision simulation systems for the visually impaired	23,04
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	22,90
Knowledge of techniques for developing tactile skills (Haptic technologies)	22,70
Knowledge of text to speech and speech input recognition systems	22,24
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	22,20
Knowledge of the design tactile interfaces with vibration patterns	21,76
Knowledge of assistive systems for the visually impaired on Apple devices	21,00
Knowledge of assistive systems for the visually impaired on Android devices	21,00
Knowledge of the vibrational/tactile actuators of Android devices	21,00
Knowledge of the vibrational/tactile actuators of Apple devices	21,00
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	17,90



Knowledge of European and National legislation on school inclusion	12,60
Cognitive and coordination, design and management knowledge	12,03
knowledge of the main computer vocabulary	11,60

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	4,13	3	5
Information finding and analysis skills	30	4,00	3	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	4,60	3	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	4,80	4	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,77	4	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,77	4	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,90	4	5

Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,40	3	5
Ability to use vibrational patterns to encode information to transfer	30	4,70	4	5
ICT and all new technologies skills	30	4,30	3	5
Ability to evaluate user feedback from a tactile interaction	30	4,57	4	5
Ability to define user experience using tactile and audio interaction	30	4,70	4	5
Ability to share tactile experiences and lessons in a community	30	4,63	4	5
Pedagogical skills	30	5	5	5

Avarage Difficulty Level (D_DL)

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

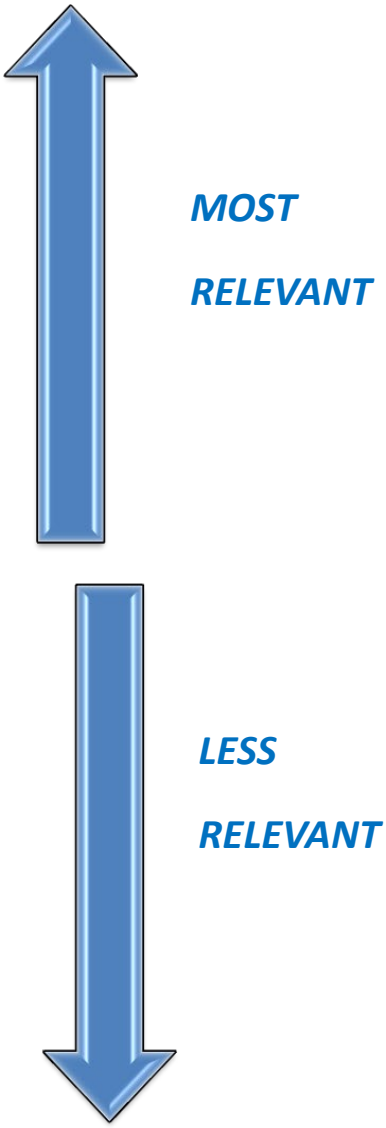
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,03	2	5
Information finding and analysis skills	30	2,93	2	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	4,63	3	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	4,73	4	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,50	3	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,57	4	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,80	4	5
Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,07	3	5
Ability to use vibrational patterns to encode information to transfer	30	4,57	4	5
ICT and all new technologies skills	30	3,67	3	5
Ability to evaluate user feedback from a tactile interaction	30	4,63	4	5
Ability to define user experience using	30	4,70	4	5

tactile and audio interaction				
Ability to share tactile experiences and lessons in a community	30	4,40	3	5
Pedagogical skills	30	2,37	1	5

Chart of Weight per Specific Skills Required (WpSSR)

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

Specific Skills	WpSSR
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	23,50
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	22,70
Ability to define user experience using tactile and audio interaction	22,09
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	21,80
Ability to use vibrational patterns to encode information to transfer	21,50
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	21,50
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	21,30
Ability to evaluate user feedback from a tactile interaction	21,16



Ability to share tactile experiences and lessons in a community	20,39
Ability to use PC/tablet/smartphone for haptic teaching/training	17,90
ICT and all new technologies skills	15,77
Project management Skills	12,50
Pedagogical skills	11,83
Information finding and analysis skills	11,70

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	4,77	4	5
Flexibility and adaptability	30	4,87	4	5
Problem solving e team working	30	4,87	4	5
Ability to motivate and inspire clients	30	4,90	4	5
Customer focus	30	4,90	4	5
Ability to cope with stress	30	4,93	4	5
Empathy and active listening	30	4,90	4	4
Ability to work independently	30	4,70	3	5
Trust building ability/ reliability	30	4,90	4	5
Innovativeness / creativity	30	4,87	4	5
Verbal and non-verbal communication skills	30	4,93	4	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,93	4	5

Avarage Difficulty Level (E_DL)

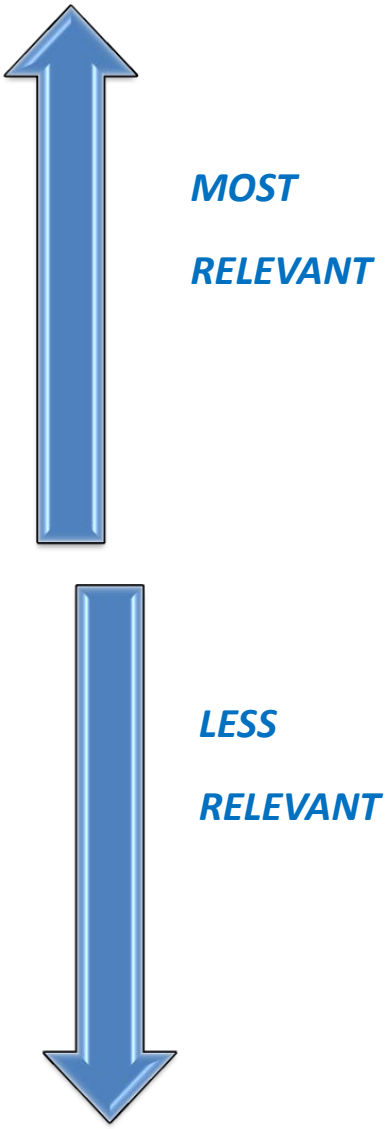
Valid cases = 30; cases with missing value(s) = 0

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,30	2	4
Flexibility and adaptability	30	3,13	1	5
Problem solving e team working	30	3,20	1	5
Ability to motivate and inspire clients	30	3,60	2	5
Customer focus	30	3,37	1	5
Ability to cope with stress	30	3,53	1	5
Empathy and active listening	30	3,63	2	5
Ability to work independently	30	2,50	1	4
Trust building ability/ reliability	30	3,13	1	5
Innovativeness / creativity	30	3,63	2	5
Verbal and non-verbal communication skills	30	3,50	3	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	3,87	3	5

Chart of Weight per Transversal Skills Required (WpTSR)

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

Transversal skills	WpTSR
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	19,08
Empathy and active listening	17,80
Innovativeness / creativity	17,68
Ability to motivate and inspire clients	17,60
Ability to cope with stress	17,40
Verbal and non-verbal communication skills	17,27
Customer focus	16,50
Teamwork/cooperation	15,70
Problem solving e team working	15,60
Trust building ability/ reliability	15,40
Flexibility and adaptability	15,20
Ability to work independently	11,80



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%
Glasses to simulate visually impaired user	0	0,00%	30	100,00%
Interface to record and track user feedback	4	13,13%	26	86,67%
Platform/App for delivery of lessons and content that meets security requirements	3	10,00%	27	90,00%
Other: touch and braille devices	10	33,33%	20	66,67%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide and Guide of usage	30	100,00%	0	0,00%
Video/audio lessons	22	73,33%	8	26,67%
Platform of contents/lessons sharing	13	43,33%	17	56,67%
Student and teacher/trainer evaluation report based on feedbacks on course	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?	28	93,33%	2	6,67%

Comments

According to the results obtained thanks to the **Italian** survey, the competence profile of the VET IN.HAPTIC Expert (expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders) 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
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	Knowledge of vision simulation systems for the visually impaired	Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	Empathy and active listening
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	Ability to define user experience using tactile and audio interaction	Innovativeness / creativity

Involve students in the learning process	Knowledge of techniques for developing tactile skills (Haptic technologies)	Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	Ability to motivate and inspire clients
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of text to speech and speech input recognition systems	Ability to use vibrational patterns to encode information to transfer	Ability to cope with stress
Monitoring, verification and evaluation of the results achieved by students	Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	Verbal and non-verbal communication skills
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	Knowledge of the design tactile interfaces with vibration patterns	Ability to create, visualise and manage training contents/materials considering video-audio and touch components	Customer focus
Information and involvement of parents and caregivers	Knowledge of assistive systems for the visually impaired on Apple devices	Ability to evaluate user feedback from a tactile interaction	Teamwork/cooperation
Definition of the studies program and of the educational path/project of the	Knowledge of assistive systems for the visually impaired on	Ability to share tactile experiences and lessons in a community	Problem solving e team working

students with sensory disabilities and learning disorders: needs analysis	Android devices		
Drafting final evaluation of students	Knowledge of the vibrational/tactile actuators of Android devices	Ability to use PC/tablet/smartphone for haptic teaching/training	Trust building ability/ reliability
	Knowledge of the vibrational/tactile actuators of Apple devices	ICT and all new technologies skills	
	Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	Project management Skills	
	Knowledge of European and National legislation on school inclusion	Pedagogical skills	
	Cognitive and coordination, design and management knowledge		
	knowledge of the main computer vocabulary	Information finding and analysis skills	Flexibility and adaptability
			Ability to work independently

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

- Slide and Guide of usage
- Student and teacher/trainer evaluation report based on feedbacks on course
- Video/audio lessons
- Platform of contents/lessons sharing

2.1.3 Charts 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/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,43	2	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,40	3	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,57	3	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	4,40	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,17	2	5
Involve students in the learning process	30	4,83	4	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	3,93	0	5

Monitoring, verification and evaluation of the results achieved by students	30	4,50	3	5
Drafting final evaluation of students	30	4,60	3	5
Information and involvement of parents and caregivers	30	4,17	2	5

Avarage Difficulty Level (B_DL)

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

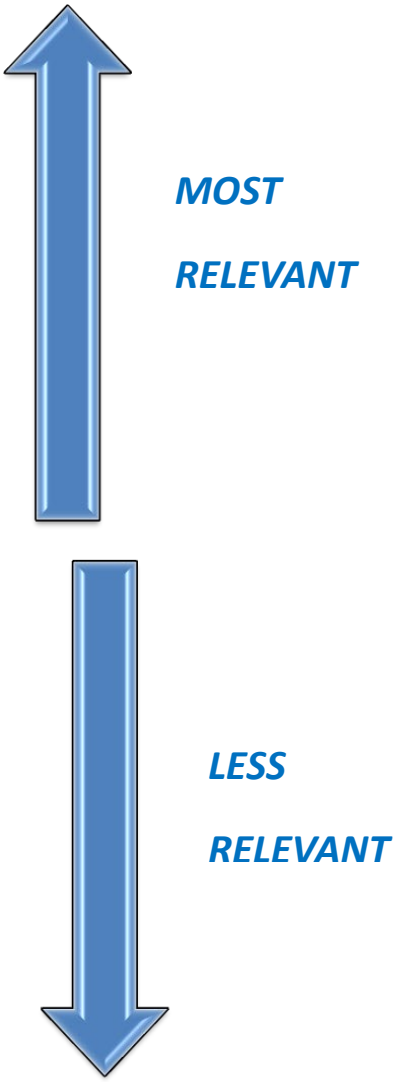
Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	30	3,70	3	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,00	3	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	3,97	2	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	3,63	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	3,57	2	5
Involve students in the learning process	30	3,80	2	5

Organization and implementation of targeted activities and pathways, management of learning progression	30	3,33	0	5
Monitoring, verification and evaluation of the results achieved by students	30	4,10	3	5
Drafting final evaluation of students	30	3,87	2	5
Information and involvement of parents and caregivers	30	3,97	2	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	18,45
Involve students in the learning process	18,37
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	18,11
Drafting final evaluation of students	17,79
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	17,60
Information and involvement of parents and caregivers	16,53
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	16,40
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	15,99
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	14,86
Organization and implementation of targeted activities and pathways, management of learning progression	13,11



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

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

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	4,57	1	5
Knowledge of European and National legislation on school inclusion	30	4,00	1	5
knowledge of the main computer vocabulary	30	4,10	2	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,40	1	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,30	3	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,47	2	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	3,90	0	5
Knowledge of the vibrational/tactile actuators of Android devices	30	4,37	3	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	4,30	3	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,40	1	5

Knowledge of assistive systems for the visually impaired on Android devices	30	4,37	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,50	2	5
Knowledge of vision simulation systems for the visually impaired	30	4,70	4	5
Knowledge of text to speech and speech input recognition systems	30	4,60	4	5
Cognitive and coordination, design and management knowledge	30	3,73	3	5

Avarage Difficulty Level (C_DL)

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

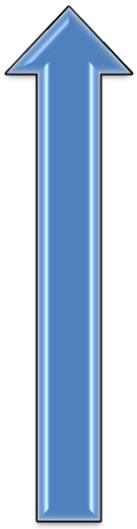
Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	4,27	1	5
Knowledge of European and National legislation on school inclusion	30	3,70	0	5
knowledge of the main computer vocabulary	30	3,3	0	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,27	3	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	4,20	3	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	3,93	2	5

Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	3,80	1	5
Knowledge of the vibrational/tactile actuators of Android devices	30	3,63	0	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	3,90	2	5
Knowledge of the design tactile interfaces with vibration patterns	30	4,23	2	5
Knowledge of assistive systems for the visually impaired on Android devices	30	4,23	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	4,23	1	5
Knowledge of vision simulation systems for the visually impaired	30	4,30	2	5
Knowledge of text to speech and speech input recognition systems	30	4,03	2	5
Cognitive and coordination, design and management knowledge	30	4,33	3	5

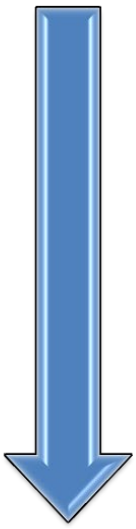
Chart of Weight per Knowledge Required (WpKnR)

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

Knowledge	WpKnR
Knowledge of vision simulation systems for the visually impaired	20,21
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	19,50
Knowledge of assistive systems for the visually impaired on Apple devices	19,05
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	18,80
Knowledge of the design tactile interfaces with vibration patterns	18,63
Knowledge of text to speech and speech input recognition systems	18,55
Knowledge of assistive systems for the visually impaired on Android devices	18,49
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	18,10
Knowledge of techniques for developing tactile skills (Haptic technologies)	17,60
Knowledge of the vibrational/tactile actuators of Apple devices	16,80
Cognitive and coordination, design and management knowledge	16,18
Knowledge of the vibrational/tactile actuators of Android devices	15,90



MOST RELEVANT



LESS RELEVANT

Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	14,80
Knowledge of European and National legislation on school inclusion	14,80
knowledge of the main computer vocabulary	13,50

Section D - SPECIFIC SKILLS

Avarage Importance Level (D_IL)

Valid cases = 29; cases with missing value(s) = 1.

Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	4,33	1	5
Information finding and analysis skills	30	4,20	1	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	4,73	4	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	4,23	1	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,43	2	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,47	3	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio	30	4,50	2	5

components.				
Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,17	2	5
Ability to use vibrational patterns to encode information to transfer	30	4,00	1	5
ICT and all new technologies skills	30	4,53	2	5
Ability to evaluate user feedback from a tactile interaction	30	4,10	0	5
Ability to define user experience using tactile and audio interaction	30	4,53	3	5
Ability to share tactile experiences and lessons in a community	29	4,38	2	5
Pedagogical skills	30	4,83	3	5

Avarage Difficulty Level (D_DL)

Valid cases = 29; cases with missing value(s) = 1.

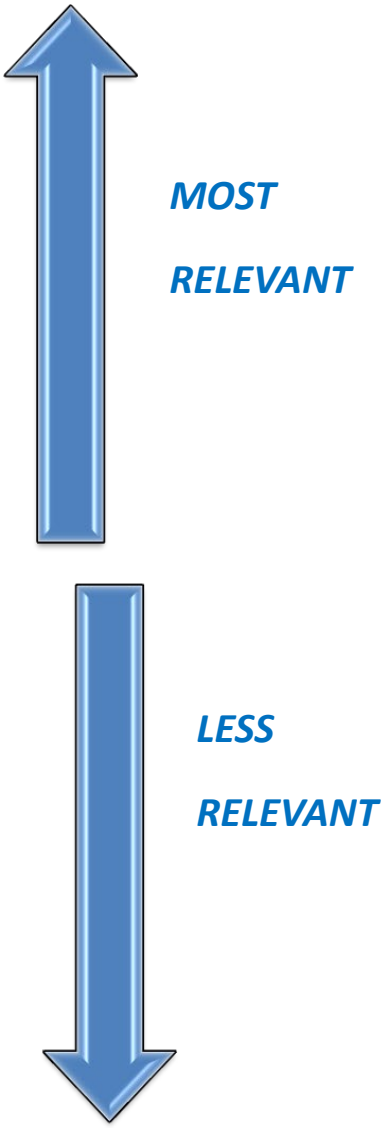
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	4,03	0	5
Information finding and analysis skills	30	3,73	2	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	3,90	0	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	3,90	2	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	4,10	3	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	3,93	1	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,03	2	5
Ability to use PC/tablet/smartphone for haptic teaching/training	30	3,40	0	5
Ability to use vibrational patterns to encode information to transfer	30	4,03	0	5
ICT and all new technologies skills	30	3,63	0	5
Ability to evaluate user feedback from a tactile interaction	30	3,83	0	5

Ability to define user experience using tactile and audio interaction	30	4,10	1	5
Ability to share tactile experiences and lessons in a community	29	3,76	1	5
Pedagogical skills	30	4,30	2	5

Chart of Weight per Specific Skills Required (WpSSR)

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

Specific Skills	WpSSR
Pedagogical skills	20,78
Ability to define user experience using tactile and audio interaction	18,59
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	18,50
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	18,20
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	18,20
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	17,60
Project management Skills	17,50
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational	16,50



patterns, binaural ASMR/audio content	
ICT and all new technologies skills	16,47
Ability to share tactile experiences and lessons in a community	16,46
Ability to use vibrational patterns to encode information to transfer	16,10
Ability to evaluate user feedback from a tactile interaction	15,72
Information finding and analysis skills	15,70
Ability to use PC/tablet/smartphone for haptic teaching/training	14,20

Section E - TRANSVERSAL SKILLS

Avarage Importance Level (E_IL)

Valid cases = 29; cases with missing value(s) =1.

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	4,53	1	5
Flexibility and adaptability	29	4,45	3	5
Problem solving e team working	29	4,10	0	5
Ability to motivate and inspire clients	29	4,48	3	5
Customer focus	29	4,07	1	5
Ability to cope with stress	29	4,72	3	5
Empathy and active listening	29	4,79	3	4
Ability to work independently	29	4,03	0	5
Trust building ability/ reliability	29	4,31	4	5
Innovativeness / creativity	29	4,86	4	5
Verbal and non-verbal communication skills	30	4,40	2	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,40	4	5

Avarage Difficulty Level (E_DL)

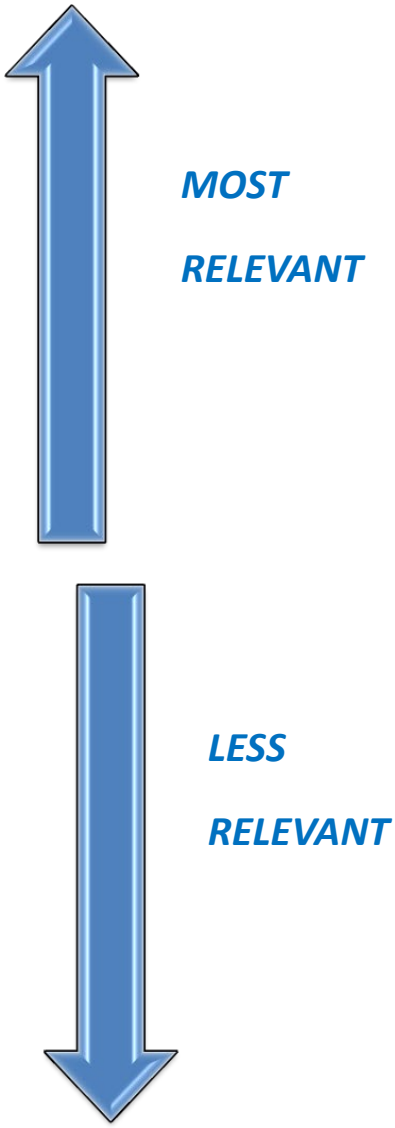
Valid cases = 30; cases with missing value(s) = 0

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,63	0	4
Flexibility and adaptability	30	3,70	2	5
Problem solving e team working	30	3,87	2	5
Ability to motivate and inspire clients	30	3,73	1	5
Customer focus	30	3,50	1	5
Ability to cope with stress	30	4,00	2	5
Empathy and active listening	30	3,87	2	4
Ability to work independently	30	3,23	0	5
Trust building ability/ reliability	30	3,43	2	5
Innovativeness / creativity	30	3,90	1	5
Verbal and non-verbal communication skills	30	3,80	2	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	3,80	2	5

Chart of Weight per Transversal Skills Required (WpTSR)

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

Transversal skills	WpTSR
Innovativeness / creativity	18,96
Ability to cope with stress	18,90
Empathy and active listening	18,50
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	16,72
Verbal and non-verbal communication skills	16,72
Ability to motivate and inspire clients	16,70
Teamwork/cooperation	16,50
Flexibility and adaptability	16,50
Problem solving e team working	15,90
Trust building ability/ reliability	14,80
Customer focus	14,20
Ability to work independently	13,00



Section F - EQUIPMENT, TOOLS AND MATERIALS USED

Frequency

Output and Results	YES	Percent	NO	Percent
Internet	28	93,33%	2	6,67%
PC, tablet o Smartphone	29	96,67%	1	3,33%
Glasses to simulate visually impaired user	1	3,33%	28	93,33%
Interface to record and track user feedback	14	46,67%	15	50,00%
Platform/App for delivery of lessons and content that meets security requirements	13	43,33%	17	56,67%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide and Guide of usage	24	80,00%	6	20,00%
Video/audio lessons	22	73,33%	8	26,67%
Platform of contents/lessons sharing	14	46,67%	16	53,33%
Student and teacher/trainer evaluation report based on feedbacks on course	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?	20	66,67%	10	33,33%

Comments

According to the results obtained thanks to the **Portuguese** survey, the competence profile of the VET IN.HAPTIC Expert (expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders) 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 vision simulation systems for the visually impaired	Pedagogical skills	Innovativeness / creativity
Involve students in the learning process	Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	Ability to define user experience using tactile and audio interaction	Ability to cope with stress
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	Knowledge of assistive systems for the visually impaired on Apple devices	Ability to create, visualise and manage training contents/materials considering video-audio and touch components	Empathy and active listening
Drafting final evaluation of	Knowledge of technology of touch, a.k.a. Haptics, applied to	Ability to manage the semantics related to content delivery in relation to the type of	Ability to build, manage and support relationships with people in training with

students	education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	different ability of the subject and the expected KPIs of educational transfer in relation to the content used	sensory disabilities and learning disorders
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	Knowledge of the design tactile interfaces with vibration patterns	Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	Verbal and non-verbal communication skills
Information and involvement of parents and caregivers	Knowledge of text to speech and speech input recognition systems	Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	Ability to motivate and inspire clients
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	Knowledge of assistive systems for the visually impaired on Android devices	Project management Skills	Teamwork/cooperation
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio	Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	Flexibility and adaptability

	components		
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	Knowledge of techniques for developing tactile skills (Haptic technologies)	ICT and all new technologies skills	Problem solving e team working
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of the vibrational/tactile actuators of Apple devices	Ability to share tactile experiences and lessons in a community	Trust building ability/ reliability
	Cognitive and coordination, design and management knowledge	Ability to use vibrational patterns to encode information to transfer	
	Knowledge of the vibrational/tactile actuators of Android devices	Ability to evaluate user feedback from a tactile interaction	
	Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	Information finding and analysis skills Pedagogical skills	
	Knowledge of European and National legislation on school inclusion		
	knowledge of the main computer vocabulary	Ability to define user experience using tactile	Customer focus
			Ability to work

		and audio interaction	independently

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

- Student and teacher/trainer evaluation report based on feedbacks on course
- Slide and Guide of usage
- Video/audio lessons
- Platform of contents/lessons sharing

2.1.4 Charts 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/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,30	3	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,70	3	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,43	2	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	3,7	2	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	3,93	2	5
Involve students in the learning process	30	4,17	3	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	4,03	2	5

Monitoring, verification and evaluation of the results achieved by students	30	4,40	3	5
Drafting final evaluation of students	30	4,00	2	5
Information and involvement of parents and caregivers	30	4,47	1	5

Avarage Difficulty Level (B_DL)

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

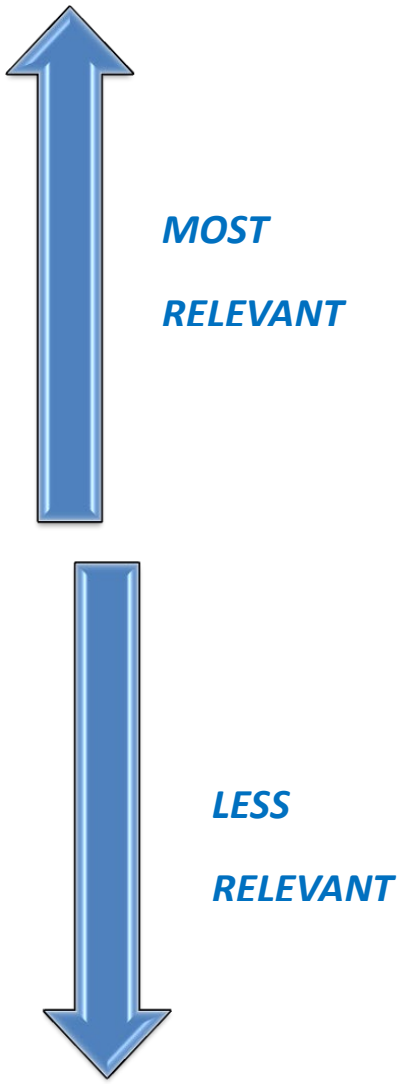
Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	30	3,46	2	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	3,03	1	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	3,90	1	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	3,87	3	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	3,57	1	5
Involve students in the learning process	30	3,23	2	5

Organization and implementation of targeted activities and pathways, management of learning progression	30	2,89	1	4
Monitoring, verification and evaluation of the results achieved by students	30	3,13	2	5
Drafting final evaluation of students	30	3,37	1	5
Information and involvement of parents and caregivers	30	4,07	1	5

Chart of Weight per Key Activity (WpKA)

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

Key Activity	WpKA
Information and involvement of parents and caregivers	18,16
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	17,29
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	14,91
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	14,31
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	14,26
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	14,03
Monitoring, verification and evaluation of the results achieved by students	13,79
Involve students in the learning process	13,47
Drafting final evaluation of students	13,47
Organization and implementation of targeted activities and pathways, management of learning progression	11,43



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

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

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,67	2	5
Knowledge of European and National legislation on school inclusion	30	3,73	2	5
knowledge of the main computer vocabulary	30	3,60	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	3,73	2	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	3,27	2	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	3,50	2	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	3,53	3	5
Knowledge of the vibrational/tactile actuators of Android devices	30	2,97	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	2,83	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	3,43	1	5

Knowledge of assistive systems for the visually impaired on Android devices	30	3,27	1	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	3,20	1	5
Knowledge of vision simulation systems for the visually impaired	30	3,50	2	5
Knowledge of text to speech and speech input recognition systems	30	3,60	2	5
Cognitive and coordination, design and management knowledge	30	3,57	1	5

Avarage Difficulty Level (C_DL)

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

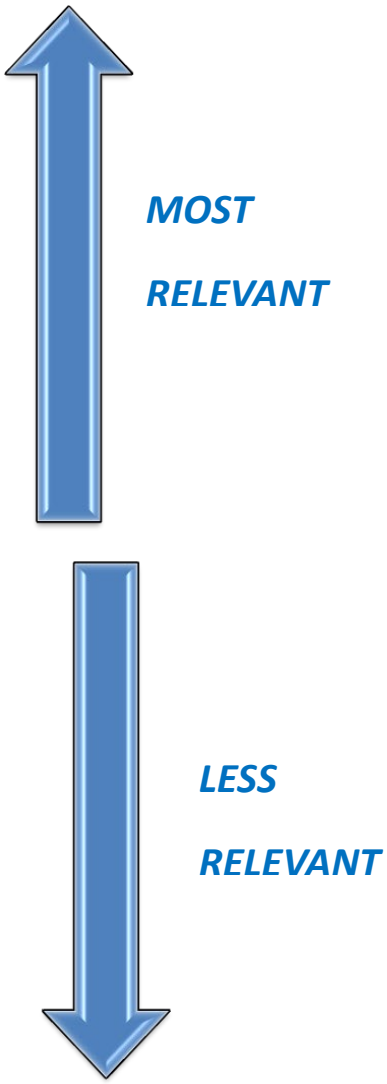
Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,83	2	5
Knowledge of European and National legislation on school inclusion	30	2,90	1	5
knowledge of the main computer vocabulary	30	2,77	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	3,53	2	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	3,60	2	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	4,10	3	5

Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,17	2	5
Knowledge of the vibrational/tactile actuators of Android devices	30	3,30	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	3,23	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	3,73	2	5
Knowledge of assistive systems for the visually impaired on Android devices	30	3,30	1	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	3,30	1	5
Knowledge of vision simulation systems for the visually impaired	30	4,10	2	5
Knowledge of text to speech and speech input recognition systems	30	3,87	2	5
Cognitive and coordination, design and management knowledge	30	3,47	1	5

Chart of Weight per Knowledge Required (WpKnR)

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

Knowledge	WpKnR
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	14,70
Knowledge of techniques for developing tactile skills (Haptic technologies)	14,40
Knowledge of vision simulation systems for the visually impaired	14,35
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	14,10
Knowledge of text to speech and speech input recognition systems	13,92
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	13,20
Knowledge of the design tactile interfaces with vibration patterns	12,82
Cognitive and coordination, design and management knowledge	12,36
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	11,80
Knowledge of European and National legislation on school inclusion	10,80
Knowledge of assistive systems for the visually impaired on Android devices	10,78
Knowledge of assistive systems for the visually impaired on Apple devices	10,56



knowledge of the main computer vocabulary	9,96
Knowledge of the vibrational/tactile actuators of Android devices	9,79
Knowledge of the vibrational/tactile actuators of Apple devices	9,16

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	4,17	3	5
Information finding and analysis skills	30	4,03	3	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	3,80	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	3,63	2	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	3,83	2	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,37	3	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,13	2	5

Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,10	2	5
Ability to use vibrational patterns to encode information to transfer	30	3,97	2	5
ICT and all new technologies skills	30	3,97	2	5
Ability to evaluate user feedback from a tactile interaction	30	4,17	2	5
Ability to define user experience using tactile and audio interaction	30	3,67	1	5
Ability to share tactile experiences and lessons in a community	30	3,77	1	5
Pedagogical skills	30	4,67	4	5

Avarage Difficulty Level (D_DL)

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

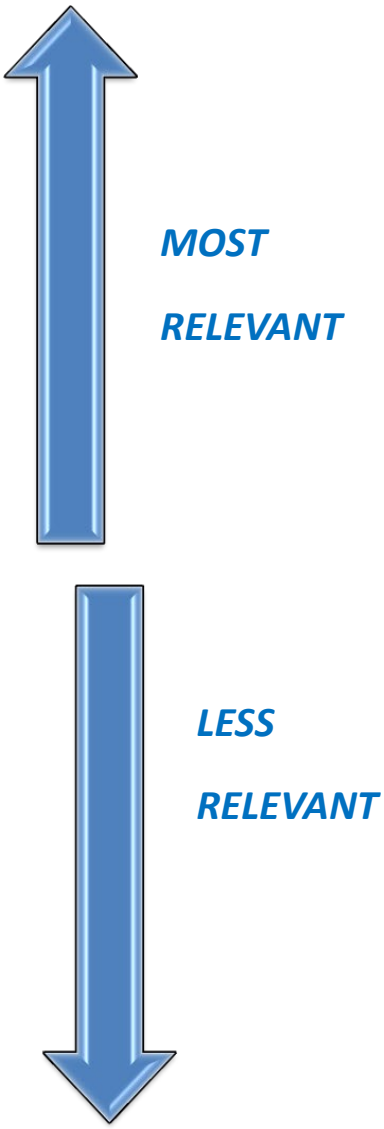
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,40	1	5
Information finding and analysis skills	30	3,00	1	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	3,93	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	3,87	3	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	3,73	2	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	3,80	2	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,17	2	5
Ability to use PC/tablet/smartphone for haptic teaching/training	30	3,60	2	5
Ability to use vibrational patterns to encode information to transfer	30	4,07	3	5
ICT and all new technologies skills	30	3,77	1	5
Ability to evaluate user feedback from a tactile interaction	30	3,67	1	5

Ability to define user experience using tactile and audio interaction	30	3,30	1	5
Ability to share tactile experiences and lessons in a community	30	3,70	1	5
Pedagogical skills	30	3,97	1	5

Chart of Weight per Specific Skills Required (WpSSR)

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

Specific Skills	WpSSR
Pedagogical skills	18,51
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	17,20
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	16,60
Ability to use vibrational patterns to encode information to transfer	16,10
Ability to evaluate user feedback from a tactile interaction	15,28
ICT and all new technologies skills	14,94
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	14,90
Ability to use PC/tablet/smartphone for haptic teaching/training	14,80



Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	14,30
Project management Skills	14,20
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	14,00
Ability to share tactile experiences and lessons in a community	13,94
Ability to define user experience using tactile and audio interaction	12,10
Information finding and analysis skills	12,10

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	4,63	3	5
Flexibility and adaptability	30	4,47	3	5
Problem solving e team working	30	4,53	3	5
Ability to motivate and inspire clients	30	4,43	3	5
Customer focus	30	4,53	3	5
Ability to cope with stress	30	4,37	3	5
Empathy and active listening	30	4,43	2	4
Ability to work independently	30	4,20	2	5
Trust building ability/ reliability	30	4,53	3	5
Innovativeness / creativity	30	4,37	2	5
Verbal and non-verbal communication skills	30	4,30	2	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,43	3	5

Avarage Difficulty Level (E_DL)

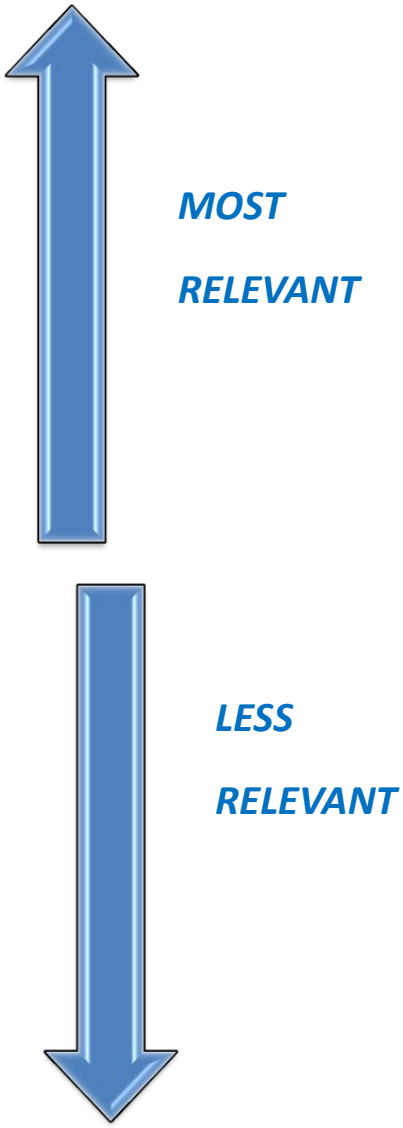
Valid cases = 30; cases with missing value(s) = 0

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,97	2	4
Flexibility and adaptability	30	3,80	2	5
Problem solving e team working	30	4,07	2	5
Ability to motivate and inspire clients	30	3,67	2	5
Customer focus	30	4,13	2	5
Ability to cope with stress	30	4,17	2	5
Empathy and active listening	30	3,87	1	5
Ability to work independently	30	3,87	2	5
Trust building ability/ reliability	30	3,97	2	5
Innovativeness / creativity	30	3,93	1	5
Verbal and non-verbal communication skills	30	3,80	1	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,03	1	5

Chart of Weight per Transversal Skills Required (WpTSR)

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

Transversal skills	WpTSR
Customer focus	18,70
Teamwork/cooperation	18,40
Problem solving e team working	18,40
Ability to cope with stress	18,20
Trust building ability/ reliability	18,00
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	17,88
Innovativeness / creativity	17,18
Empathy and active listening	17,10
Flexibility and adaptability	17,00
Verbal and non-verbal communication skills	16,34
Ability to motivate and inspire clients	16,30
Ability to work independently	16,20



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%
Glasses to simulate visually impaired user	5	16,67%	25	83,33%
Interface to record and track user feedback	0	0,00%	30	100,00%
Platform/App for delivery of lessons and content that meets security requirements	19	63,33%	11	36,67%
Other:	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide and Guide of usage	24	80,00%	6	20,00%
Video/audio lessons	26	86,67%	4	13,33%
Platform of contents/lessons sharing	20	66,67%	10	33,33%
Student and teacher/trainer evaluation report based on feedbacks on course	25	83,33%	5	16,67%

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

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	4	13,33%	26	86,67%

Comments

According to the results obtained thanks to the **Spanish** survey, the competence profile of the VET IN.HAPTIC Expert (expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders) 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
Information and involvement of parents and caregivers	Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	Pedagogical skills	Customer focus
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	Knowledge of techniques for developing tactile skills (Haptic technologies)	Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	Teamwork/cooperation
Definition of the studies program and of the educational path/project of the students with sensory disabilities and	Knowledge of vision simulation systems for the visually impaired	Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends	Problem solving e team working

learning disorders: needs analysis		observed over time	
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	Ability to use vibrational patterns to encode information to transfer	Ability to cope with stress
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	Knowledge of text to speech and speech input recognition systems	Ability to evaluate user feedback from a tactile interaction	Trust building ability/ reliability
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	ICT and all new technologies skills	Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
Monitoring, verification and evaluation of the results achieved by students	Knowledge of the design tactile interfaces with vibration patterns	Ability to create, visualise and manage training contents/materials considering video-audio and touch components	Innovativeness / creativity
Involve students in the learning process	Cognitive and coordination, design and management knowledge	Ability to use PC/tablet/smartphone for haptic teaching/training	Empathy and active listening

Drafting final evaluation of students	Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	Flexibility and adaptability
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of European and National legislation on school inclusion	Project management Skills	Verbal and non-verbal communication skills
	Knowledge of assistive systems for the visually impaired on Android devices	Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	
	Knowledge of assistive systems for the visually impaired on Apple devices	Ability to share tactile experiences and lessons in a community	
	knowledge of the main computer vocabulary	Ability to define user experience using tactile and audio interaction	
	Knowledge of the vibrational/tactile actuators of Android devices		
	Knowledge of the vibrational/tactile actuators of Apple devices	Information finding and analysis skills	Ability to motivate and inspire clients
			Ability to work independently

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

- Video/audio lessons
- Student and teacher/trainer evaluation report based on feedbacks on course
- Slide and Guide of usage
- Platform of contents/lessons sharing

2.1.5 Charts in Greece

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/project of the students with sensory disabilities and learning disorders: needs analysis	30	4,23	2	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	4,50	2	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	4,37	2	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	3,87	2	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	4,20	2	5
Involve students in the learning process	30	4,13	3	5
Organization and implementation of targeted activities and pathways, management of learning progression	30	4,30	2	5

Monitoring, verification and evaluation of the results achieved by students	30	4,33	2	5
Drafting final evaluation of students	30	4,17	2	5
Information and involvement of parents and caregivers	30	4,23	3	5
Feedback from children, parents, interdisciplinary team	1	5	/	/

Avarage Difficulty Level (B_DL)

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

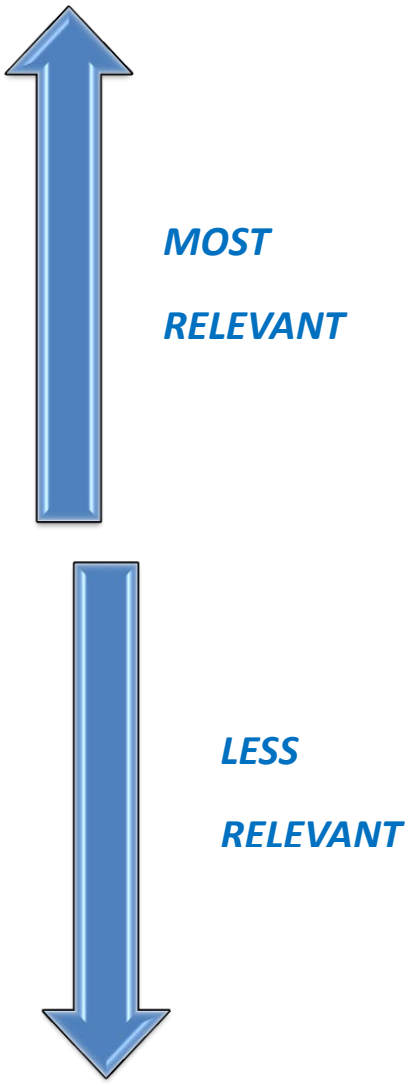
Key Activity	N	Avarage	Minimum	Maximum
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	30	3,40	1	5
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	30	3,53	1	5
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	30	3,80	1	5
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	30	3,37	1	5
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	30	3,73	1	5
Involve students in the learning	30	3,40	1	5

process				
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	3,40	1	5
Drafting final evaluation of students	30	2,80	1	5
Information and involvement of parents and caregivers	30	3,67	1	5
Feedback from children, parents, interdisciplinary team	1	1	/	/

Chart of Weight per Key Activity (WpKA)

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

Key Activity	WpKA
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	16,60
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	15,90
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	15,70
Information and involvement of parents and caregivers	15,50
Monitoring, verification and evaluation of the results achieved by students	14,70
Organization and implementation of targeted activities and pathways, management of learning progression	14,60
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	14,40
Involve students in the learning process	14,10
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	13,00
Drafting final evaluation of students	11,70



Section C - KNOWLEDGE

Avarage Importance Level (C_IL)

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

Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,87	2	5
Knowledge of European and National legislation on school inclusion	30	3,47	1	5
knowledge of the main computer vocabulary	30	3,50	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	4,10	3	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	3,77	2	5
Knowledge of techniques for developing tactile skills (Haptic technologies)	30	3,67	2	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	3,67	2	5
Knowledge of the vibrational/tactile actuators of Android devices	30	3,50	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	3,27	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	3,30	1	5

Knowledge of assistive systems for the visually impaired on Android devices	30	3,80	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	3,73	2	5
Knowledge of vision simulation systems for the visually impaired	30	3,77	2	5
Knowledge of text to speech and speech input recognition systems	30	3,73	2	5
Cognitive and coordination, design and management knowledge	29	3,86	1	5

Avarage Difficulty Level (C_DL)

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

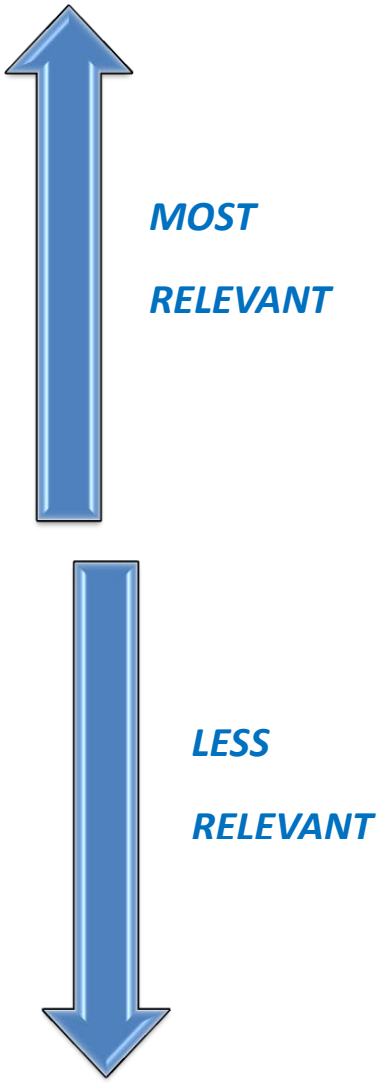
Knowledge	N	Avarage	Minimum	Maximum
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	30	3,63	1	5
Knowledge of European and National legislation on school inclusion	30	3,67	1	5
knowledge of the main computer vocabulary	30	3,10	1	5
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	30	3,97	2	5
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	30	3,97	2	5

Knowledge of techniques for developing tactile skills (Haptic technologies)	30	3,93	1	5
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	30	4,10	2	5
Knowledge of the vibrational/tactile actuators of Android devices	30	3,13	1	5
Knowledge of the vibrational/tactile actuators of Apple devices	30	3,13	1	5
Knowledge of the design tactile interfaces with vibration patterns	30	3,63	1	5
Knowledge of assistive systems for the visually impaired on Android devices	30	3,73	2	5
Knowledge of assistive systems for the visually impaired on Apple devices	30	3,60	2	5
Knowledge of vision simulation systems for the visually impaired	30	3,93	2	5
Knowledge of text to speech and speech input recognition systems	30	3,57	1	5
Cognitive and coordination, design and management knowledge	29	3,34	1	5

Chart of Weight per Knowledge Required (WpKnR)

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

Knowledge	WpKnR
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	16,30
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	15,00
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	14,90
Knowledge of vision simulation systems for the visually impaired	14,82
Knowledge of techniques for developing tactile skills (Haptic technologies)	14,40
Knowledge of assistive systems for the visually impaired on Android devices	14,19
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	14,05
Knowledge of assistive systems for the visually impaired on Apple devices	13,44
Knowledge of text to speech and speech input recognition systems	13,32
Cognitive and coordination, design and management knowledge	12,90
Knowledge of European and National legislation on school inclusion	12,71
Knowledge of the design tactile interfaces with vibration patterns	11,99



Knowledge of the vibrational/tactile actuators of Android devices	11,00
knowledge of the main computer vocabulary	10,90
Knowledge of the vibrational/tactile actuators of Apple devices	10,20

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	4,17	1	5
Information finding and analysis skills	30	4,10	1	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	3,93	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	3,53	2	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	3,67	1	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	4,23	3	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,20	2	5

Ability to use PC/tablet/smartphone for haptic teaching/training	30	4,07	2	5
Ability to use vibrational patterns to encode information to transfer	30	3,97	2	5
ICT and all new technologies skills	30	4,00	2	5
Ability to evaluate user feedback from a tactile interaction	30	4,17	2	5
Ability to define user experience using tactile and audio interaction	30	3,53	1	5
Ability to share tactile experiences and lessons in a community	30	3,67	1	5
Pedagogical skills	30	4,67	4	5

Avarage Difficulty Level (D_DL)

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

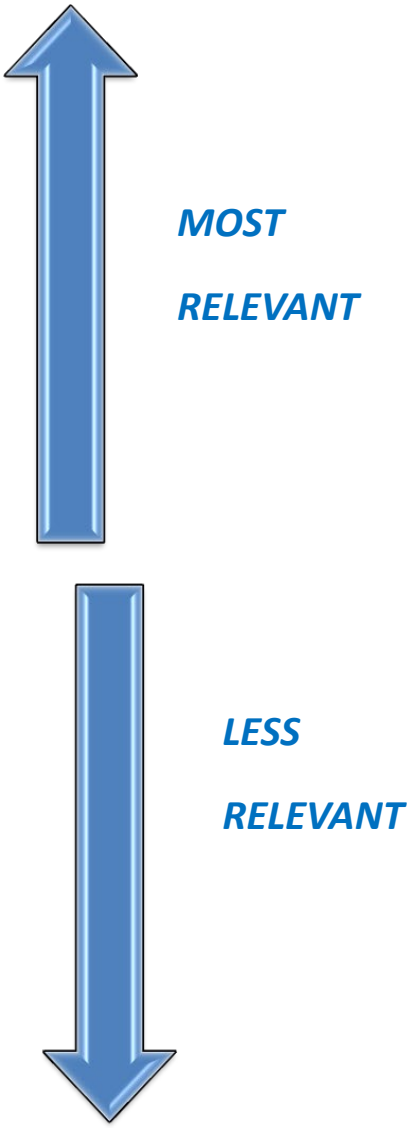
Specific Skills	N	Avarage	Minimum	Maximum
Project management Skills	30	3,27	1	5
Information finding and analysis skills	30	3,03	1	5
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	30	3,87	2	5
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	30	3,80	2	5
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	30	3,43	2	5
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	30	3,60	2	5
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	30	4,17	2	5
Ability to use PC/tablet/smartphone for haptic teaching/training	30	3,60	2	5
Ability to use vibrational patterns to encode information to transfer	30	4,03	3	5
ICT and all new technologies skills	30	3,77	1	5
Ability to evaluate user feedback from a tactile interaction	30	3,67	1	5

Ability to define user experience using tactile and audio interaction	30	3,33	1	5
Ability to share tactile experiences and lessons in a community	30	3,57	1	5
Pedagogical skills	30	3,97	1	5

Chart of Weight per Specific Skills Required (WpSSR)

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

Specific Skills	WpSSR
Pedagogical skills	18,51
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	17,50
Ability to use vibrational patterns to encode information to transfer	16,00
Ability to evaluate user feedback from a tactile interaction	15,28
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	15,20
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	15,20
ICT and all new technologies skills	15,07
Ability to use PC/tablet/smartphone for haptic teaching/training	14,60
Project management Skills	13,60



Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	13,40
Ability to share tactile experiences and lessons in a community	13,08
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	12,60
Information finding and analysis skills	12,40
Ability to define user experience using tactile and audio interaction	11,78

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	4,80	4	5
Flexibility and adaptability	30	4,57	3	5
Problem solving e team working	29	4,69	3	5
Ability to motivate and inspire clients	30	4,77	3	5
Customer focus	30	4,67	4	5
Ability to cope with stress	30	4,43	3	5
Empathy and active listening	30	4,50	2	5
Ability to work independently	30	4,13	1	5
Trust building ability/ reliability	30	4,70	3	5
Innovativeness / creativity	30	4,23	2	5
Verbal and non-verbal communication skills	30	4,23	1	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	4,50	3	5
Students' emotional involvement	1	5	/	/

Avarage Difficulty Level (E_DL)

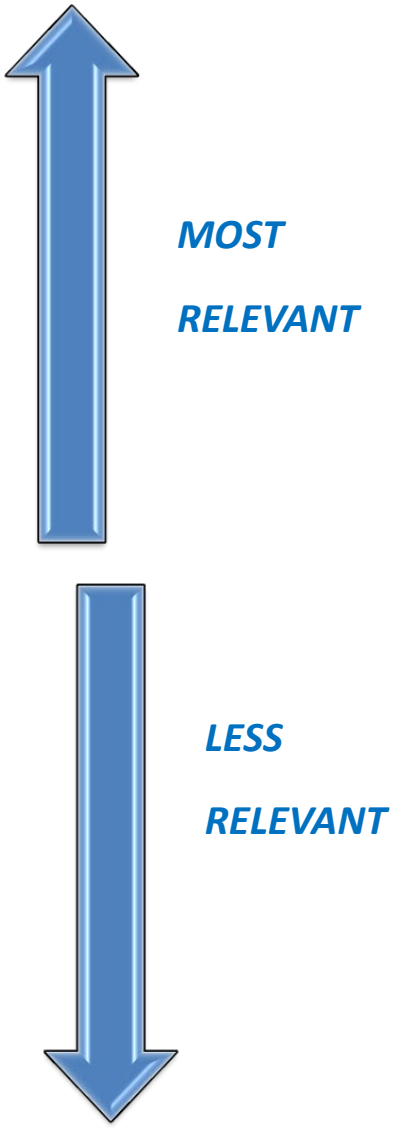
Valid cases = 30; cases with missing value(s) = 0

Transversal skills	N	Avarage	Minimum	Maximum
Teamwork/cooperation	30	3,63	1	5
Flexibility and adaptability	30	3,43	1	5
Problem solving e team working	29	3,86	2	5
Ability to motivate and inspire clients	30	3,70	2	5
Customer focus	30	3,87	2	5
Ability to cope with stress	30	4,20	2	5
Empathy and active listening	30	3,20	1	4
Ability to work independently	30	3,23	1	5
Trust building ability/ reliability	30	4,00	1	5
Innovativeness / creativity	30	3,63	1	5
Verbal and non-verbal communication skills	30	3,27	1	5
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	30	3,83	1	5
Students' emotional involvement	1	4,00	/	/

Chart of Weight per Transversal Skills Required (WpTSR)

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

Transversal skills	WpTSR
Trust building ability/ reliability	18,80
Ability to cope with stress	18,60
Problem solving e team working	18,10
Customer focus	18,00
Ability to motivate and inspire clients	17,60
Teamwork/cooperation	17,40
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	17,25
Flexibility and adaptability	15,70
Innovativeness / creativity	15,38
Empathy and active listening	14,40
Verbal and non-verbal communication skills	13,83
Ability to work independently	13,40



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%
Glasses to simulate visually impaired user	4	13,33%	26	86,67%
Interface to record and track user feedback	2	6,67%	28	93,33%
Platform/App for delivery of lessons and content that meets security requirements	17	56,67%	13	43,33%
Other: conventional games	1	3,33%	29	96,67%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section G - OUTPUTS AND RESULTS ASSOCIATED WITH YOUR KEY ACTIVITY

Frequency

Output and Results	YES	Percent	NO	Percent
Slide and Guide of usage	20	66,67%	10	33,33%
Video/audio lessons	25	83,33%	5	16,67%
Platform of contents/lessons sharing	17	56,67%	13	43,33%
Student and teacher/trainer evaluation report based on feedbacks on course	18	60,00%	12	40,00%

Other: Use of students' work at teaching	1	3,33%	29	96,67%
Other: Use of projects at teaching	1	3,33%	29	96,67%
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/
Other	/	/	/	/

Section H - ORGANIZATIONAL SUPERVISION

Frequency

Question	YES	Valid Percent	NO	Valid Percent
1. Do you get supervision?	6	20,00%	24	80,00%

Comments

According to the results obtained thanks to the **Greek** survey, the competence profile of the VET IN.HAPTIC Expert (expert in pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders) 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 lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	Pedagogical skills	Trust building ability/ reliability
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	Ability to cope with stress
Transfer of know-how to students for the correct use of learning tools based on video-audio and	Knowledge of accessibility and assistive technologies, use of tools and devices	Ability to use vibrational patterns to encode information to transfer	Problem solving e team working

touch components	based on tactile experiences combined with video-audio components		
Information and involvement of parents and caregivers	Knowledge of vision simulation systems for the visually impaired	Ability to evaluate user feedback from a tactile interaction	Customer focus
Monitoring, verification and evaluation of the results achieved by students	Knowledge of techniques for developing tactile skills (Haptic technologies)	Ability to create, visualise and manage training contents/materials considering video-audio and touch components	Ability to motivate and inspire clients
Organization and implementation of targeted activities and pathways, management of learning progression	Knowledge of assistive systems for the visually impaired on Android devices	Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	Teamwork/cooperation
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	ICT and all new technologies skills	Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
Involve students in the learning process	Knowledge of assistive systems for the visually impaired on Apple devices	Ability to use PC/tablet/smartphone for haptic teaching/training	Flexibility and adaptability
Selection of tools and devices needed for teaching based on tactile experiences combined with video-	Knowledge of text to speech and speech input recognition systems	Project management Skills	Innovativeness / creativity

audio components			
Drafting final evaluation of students	Cognitive and coordination, design and management knowledge	Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	Empathy and active listening
	Knowledge of European and National legislation on school inclusion	Ability to share tactile experiences and lessons in a community	
	Knowledge of the design tactile interfaces with vibration patterns	Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	
	Knowledge of the vibrational/tactile actuators of Android devices	Information finding and analysis skills	
	knowledge of the main computer vocabulary		
	Knowledge of the vibrational/tactile actuators of Apple devices		
		Ability to define user experience using tactile and audio interaction	Verbal and non-verbal communication skills
			Ability to work independently

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

- Video/audio lessons
- Slide and Guide of usage
- Student and teacher/trainer evaluation report based on feedbacks on course
- Platform of contents/lessons sharing

2.2 GENERAL FLOW CHART

After the presentation of results of all national surveys, we can now identify the common competence profile of the VET IN.HAPTIC Experts.

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 VET IN.HAPTIC Expert.

2.2.1 Definition of a common flow chart

Key activity

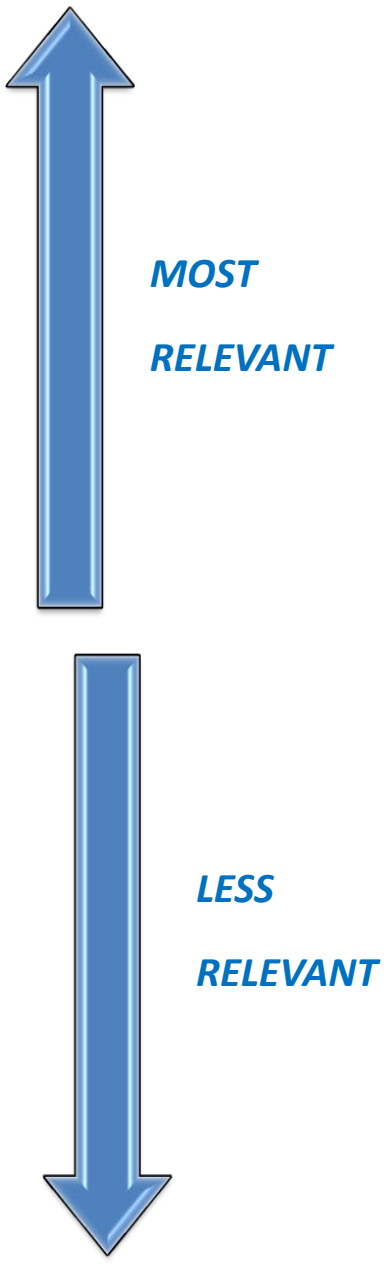
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of key activity referring VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.

Key Activity	Poland	Italy	Portugal	Spain	Greece	General Avarage
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	19,36	17,98	16,40	14,91	14,40	**16,61**
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	18,45	18,24	17,60	14,26	15,90	**16,89**
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	19,80	21,43	18,11	17,29	16,60	**18,65**
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio	19,61	22,88	15,99	14,31	13,00	**17,16**

components						
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	18,77	22,90	14,86	14,03	15,70	**17,25**
Involve students in the learning process	18,79	20,87	18,37	13,47	14,10	**17,12**
Organization and implementation of targeted activities and pathways, management of learning progression	19,49	19,53	13,11	11,43	14,60	**15,63**
Monitoring, verification and evaluation of the results achieved by students	19,90	19,07	18,45	13,79	14,70	**17,18**
Drafting final evaluation of students	16,97	17,39	17,79	13,47	11,70	**15,46**
Information and involvement of parents and caregivers	17,34	18,00	16,53	18,16	15,50	**17,11**

According to the table above, the general flowchart representing the key activities done by VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (from the most relevant to the less relevant) is the following:

Key Activity	
Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	18,65
Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	17,25
Monitoring, verification and evaluation of the results achieved by students	17,18
Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	17,16
Involve students in the learning process	17,12
Information and involvement of parents and caregivers	17,11
Definition of objectives to be achieved for students with sensory disabilities and learning disorders	16,89
Definition of the studies program and of the educational path/project of the students with sensory disabilities and learning disorders: needs analysis	16,61
Organization and implementation of targeted activities and pathways, management of learning progression	15,63
Drafting final evaluation of students	15,46



Knowledge

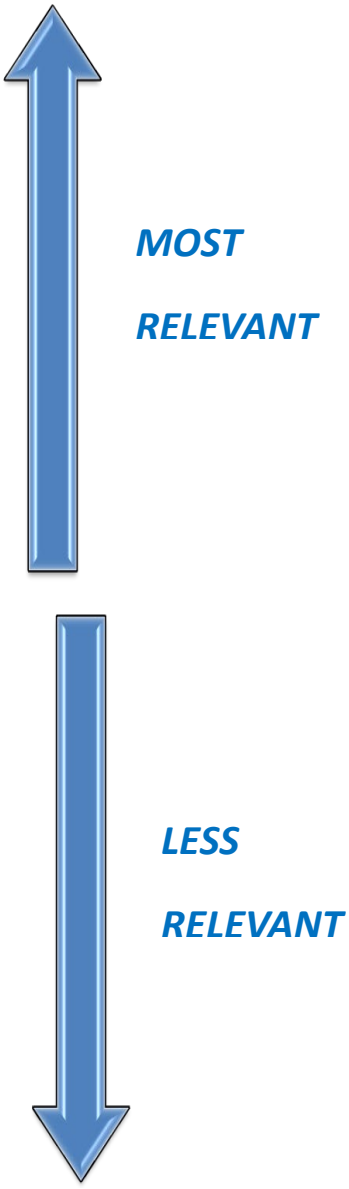
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of knowledge referring the VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.

Knowledge	Poland	Italy	Portugal	Spain	Greece	General Avarage
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	17,36	17,90	19,50	14,10	14,05	**16,58**
Knowledge of European and National legislation on school inclusion	15,21	12,60	14,80	10,80	12,71	**13,22**
knowledge of the main computer vocabulary	12,31	11,60	13,50	9,96	10,90	**11,65**
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	20,25	22,20	18,80	13,20	16,30	**18,15**
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	18,06	22,90	18,10	11,80	14,90	**17,15**
Knowledge of techniques for developing tactile	17,81	22,70	17,60	14,40	14,40	**17,38**

skills (Haptic technologies)						
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	18,22	23,20	14,80	14,70	15,00	**17,18**
Knowledge of the vibrational/tactile actuators of Android devices	16,77	21,00	15,90	9,79	11,00	**14,89**
Knowledge of the vibrational/tactile actuators of Apple devices	16,50	21,00	16,80	9,16	10,20	**14,73**
Knowledge of the design tactile interfaces with vibration patterns	17,51	21,76	18,63	12,82	11,99	**16,54**
Knowledge of assistive systems for the visually impaired on Android devices	19,05	21,00	18,49	10,78	14,19	**16,70**
Knowledge of assistive systems for the visually impaired on Apple devices	19,18	21,00	19,05	10,56	13,44	**16,65**
Knowledge of vision simulation systems for the visually impaired	20,39	23,04	20,21	14,35	14,82	**18,56**
Knowledge of text to speech and speech input recognition systems	19,36	22,24	18,55	13,92	13,32	**17,48**
Cognitive and	12,51	12,03	16,18	12,36	12,90	**13,20**

According to the table above, the general flowchart representing the knowledge requested to VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (from the most relevant to the less relevant) is the following:

Knowledge	
Knowledge of vision simulation systems for the visually impaired	18,56
Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions	18,15
Knowledge of text to speech and speech input recognition systems	17,48
Knowledge of techniques for developing tactile skills (Haptic technologies)	17,38
Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch)	17,18
Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components	17,15
Knowledge of assistive systems for the visually impaired on Android devices	16,70
Knowledge of assistive systems for the visually impaired on Apple devices	16,65
Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision.	16,58
Knowledge of the design tactile interfaces with vibration patterns	16,54
Knowledge of the vibrational/tactile actuators of Android devices	14,89



Knowledge of the vibrational/tactile actuators of Apple devices	14,73
Knowledge of European and National legislation on school inclusion	13,22
Cognitive and coordination, design and management knowledge	13,20
knowledge of the main computer vocabulary	11,65

Specific Skills

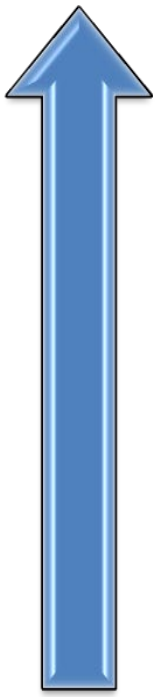
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of specific skills referring the VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.

Specific Skills	Poland	Italy	Portugal	Spain	Greece	General Avarage
Project management Skills	15,36	12,50	17,50	14,20	13,60	**14,63**
Information finding and analysis skills	15,23	11,70	15,70	12,10	12,40	**13,43**
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	17,51	21,30	18,50	14,90	15,20	**17,48**
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	18,92	22,70	16,50	14,00	13,40	**17,10**
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	17,93	21,50	18,20	14,30	12,60	**16,91**
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	20,88	21,80	17,60	16,60	15,20	**18,42**

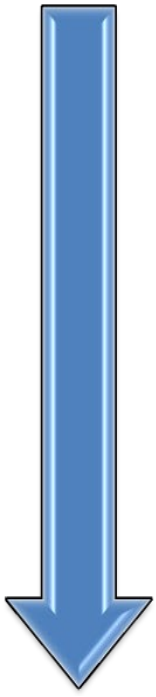
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	18,66	23,50	18,20	17,20	17,50	**19,01**
Ability to use PC/tablet/smartphone for haptic teaching/training	17,85	17,90	14,20	14,80	14,60	**15,87**
Ability to use vibrational patterns to encode information to transfer	18,19	21,50	16,10	16,10	16,00	**17,58**
ICT and all new technologies skills	15,75	15,77	16,47	14,94	15,07	**15,60**
Ability to evaluate user feedback from a tactile interaction	17,60	21,16	15,72	15,28	15,28	**17,01**
Ability to define user experience using tactile and audio interaction	17,05	22,09	18,59	12,10	11,78	**16,32**
Ability to share tactile experiences and lessons in a community	20,25	20,39	16,46	13,94	13,08	**16,82**
Pedagogical skills	16,32	11,83	20,78	18,51	18,51	**17,19**

According to the table above, the general flowchart representing the specific skills requested to VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (from the most relevant to the less relevant) is the following:

Specific skills	
Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components.	19,01
Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time	18,42
Ability to use vibrational patterns to encode information to transfer	17,58
Ability to create, visualise and manage training contents/materials considering video-audio and touch components	17,48
Pedagogical skills	17,19
Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content	17,10
Ability to evaluate user feedback from a tactile interaction	17,01
Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used	16,91
Ability to share tactile experiences and lessons in a community	16,82
Ability to define user experience using tactile and audio interaction	16,32
Ability to use PC/tablet/smartphone for haptic teaching/training	15,87
ICT and all new technologies skills	15,60



MOST RELEVANT



LESS RELEVANT

Project management Skills	14,63
Information finding and analysis skills	13,43

Transversal skills (attitudes and behaviors)

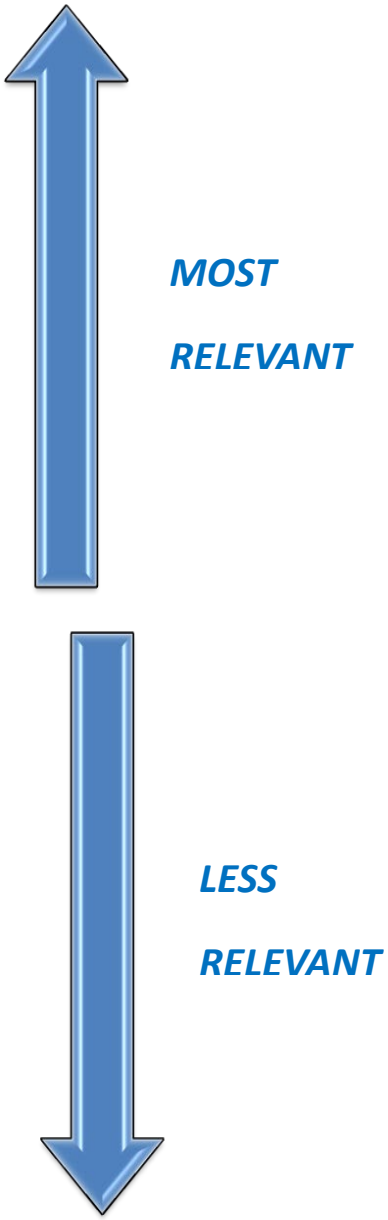
In the following table, we summarize and compare the result obtained in all involved Partner countries concerning the weight of Transversal skills referring the VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.

Transversal skills	Poland	Italy	Portugal	Spain	Greece	General Avarage
Teamwork/cooperation	18,45	15,70	16,50	18,40	17,40	**17,29**
Flexibility and adaptability	16,16	15,20	16,50	17,00	15,70	**16,11**
Problem solving e team working	17,38	15,60	15,90	18,40	18,10	**17,08**
Ability to motivate and inspire clients	17,04	17,60	16,70	16,30	17,60	**17,05**
Customer focus	18,01	16,50	14,20	18,70	18,00	**17,08**
Ability to cope with stress	18,04	17,40	18,90	18,20	18,60	**18,23**
Empathy and active listening	19,05	17,80	18,50	17,10	14,40	**17,37**
Ability to work independently	14,68	11,80	13,00	16,20	13,40	**13,82**
Trust building ability/ reliability	16,23	15,40	14,80	18,00	18,80	**16,65**
Innovativeness / creativity	18,06	17,68	18,96	17,18	15,38	**17,45**
Verbal and non-verbal communication skills	19,29	17,27	16,72	16,34	13,83	**16,69**

Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	19,79	19,08	16,72	17,88	17,25	**18,14**

According to the table above, the general flowchart representing the Transversal skills requested to VET Teachers and Trainers on the use of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders (from the most relevant to the less relevant) is the following:

Transversal skills	
Ability to cope with stress	18,23
Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders	18,14
Innovativeness / creativity	17,45
Empathy and active listening	17,37
Teamwork/cooperation	17,29
Customer focus	17,08
Problem solving e team working	17,08
Ability to motivate and inspire clients	17,05
Verbal and non-verbal communication skills	16,69
Trust building ability/ reliability	16,65
Flexibility and adaptability	16,11
Ability to work independently	13,82



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 pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders, 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/project of the students with sensory disabilities and learning disorders: needs analysis	**KnR 1 -** Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision. **KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 6 -** Knowledge of techniques for developing tactile skills (Haptic technologies) **KnR 15 -** Cognitive and coordination, design and management knowledges
KA2 - Definition of objectives to be achieved for students with sensory disabilities and learning disorders	**KnR 1 -** Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision. **KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 15 -** Cognitive and coordination, design and management knowledges
KA3 - Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-	**KnR 3** - Knowledge of of the main computer vocabulary **KnR 5** - Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components

audio components	**KnR 6 -** Knowledge of techniques for developing tactile skills (Haptic technologies) **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 10** - Knowledge of the design tactile interfaces with vibration patterns **KnR 13** – Knowledge of vision simulation systems for the visually impaired **KnR 14** – Knowledge of text to speech and speech input recognition systems **KnR 15 -** Cognitive and coordination, design and management knowledges
KA4 - Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	**KnR 8** - Knowledge of the vibrational/tactile actuators of Android devices **KnR 9** - Knowledge of the vibrational/tactile actuators of Apple devices **KnR 11** – Knowledge of assistive systems for the visually impaired on Android devices **KnR 12** - Knowledge of assistive systems for the visually impaired on Apple devices
KA5 - Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	**KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 8** - Knowledge of the vibrational/tactile actuators of Android devices **KnR 9** - Knowledge of the vibrational/tactile actuators of Apple devices **KnR 11** – Knowledge of assistive systems for the visually

	impaired on Android devices **KnR 12** - Knowledge of assistive systems for the visually impaired on Apple devices **KnR 10** - Knowledge of the design tactile interfaces with vibration patterns **KnR 13** – Knowledge of vision simulation systems for the visually impaired **KnR 14** – Knowledge of text to speech and speech input recognition systems **KnR 15 -** Cognitive and coordination, design and management knowledges
KA6 - Involve students in the learning process	**KnR 1 -** Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision. **KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 15 -** Cognitive and coordination, design and management knowledges
KA7 - Organization and implementation of targeted activities and pathways, management of learning progression	**KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 6 -** Knowledge of techniques for developing tactile skills (Haptic technologies) **KnR 7** - Knowledge of hybrid cross-platform application that

	can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 15 -** Cognitive and coordination, design and management knowledges
KA8 - Monitoring, verification and evaluation of the results achieved by students	**KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 6 -** Knowledge of techniques for developing tactile skills (Haptic technologies) **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 15 -** Cognitive and coordination, design and management knowledges
KA9 - Drafting final evaluation of students	**KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 4 -** Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions **KnR 6 -** Knowledge of techniques for developing tactile skills (Haptic technologies) **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 15 -** Cognitive and coordination, design and management knowledges

KA10 - Information and involvement of parents and caregivers	**KnR 2 -** Knowledge of European and National legislation on school inclusion **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) **KnR 15 -** Cognitive and coordination, design and management knowledges

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/project of the students with sensory disabilities and learning disorders: needs analysis	**SSR 1** - Project management Skills **SSR 2** - Information finding and analysis skills **SSR 12** - Ability to define user experience using tactile and audio interaction **SSR 14** - Pedagogical skills
KA2 - Definition of objectives to be achieved for students with sensory disabilities and learning disorders	**SSR 1** - Project management Skills **SSR 2** - Information finding and analysis skills **SSR 12** - Ability to define user experience using tactile and audio interaction **SSR 14** - Pedagogical skills
KA3 - Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	**SSR 2** - Information finding and analysis skills **SSR 3** – Ability to create, visualise and manage training contents/materials considering video-audio and touch components **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content **SSR 5** – Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used **SSR 7** - Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components. **SSR 15** - ICT and all new technologies skills
KA4 - Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	**SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content **SSR 8** - Ability to use PC/tablet/smartphone for haptic teaching/training **SSR 9** - Ability to use vibrational patterns to encode information to transfer

	SSR 10 - ICT and all new technologies skills
KA5 - Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	**SSR 2** - Information finding and analysis skills **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content **SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time **SSR 8** - Ability to use PC/tablet/smartphone for haptic teaching/training **SSR 9** - Ability to use vibrational patterns to encode information to transfer **SSR 10** - ICT and all new technologies skills
KA6 - Involve students in the learning process	**SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time **SSR 11** - Ability to evaluate user feedback from a tactile interaction **SSR 13** - Ability to share tactile experiences and lessons in a community **SSR 14** - Pedagogical 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 3** – Ability to create, visualise and manage training contents/materials considering video-audio and touch components **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content **SSR 5** – Ability to manage the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used **SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time

	SSR 11 - Ability to evaluate user feedback from a tactile interaction **SSR 13** - Ability to share tactile experiences and lessons in a community **SSR 14** - Pedagogical skills
KA8 - Monitoring, verification and evaluation of the results achieved by students	**SSR 1** - Project management Skills **SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time **SSR 11** - Ability to evaluate user feedback from a tactile interaction **SSR 14** - Pedagogical skills
KA9 - Drafting final evaluation of students	**SSR 2** - Information finding and analysis skills **SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time **SSR 10** - ICT and all new technologies skills **SSR 11** - Ability to evaluate user feedback from a tactile interaction
KA10 - Information and involvement of parents and caregivers	**SSR 1** - Project management Skills **SSR 11** - Ability to evaluate user feedback from a tactile interaction **SSR 13** - Ability to share tactile experiences and lessons in a community **SSR 14** - Pedagogical 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/project of the students with sensory disabilities and learning disorders: 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 with sensory disabilities and learning disorders
KA2 - Definition of objectives to be achieved for students with sensory disabilities and learning disorders	**TSR 4** - Ability to motivate and inspire clients **TSR 5** - Customer focus **TSR 7** - Empathy and active listening
KA3 - Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components	**TSR 5** - Customer focus **TSR 8** - Ability to work independently **TSR 10** - Innovativeness / creativity **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
KA4 - Selection of tools and devices needed for teaching based on tactile experiences combined with video-audio components	**TSR 2** - Flexibility and adaptability **TSR 10** - Innovativeness / creativity **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders
KA5 - Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	**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 **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders

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 with sensory disabilities and learning disorders
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 and caregivers	**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 with sensory disabilities and learning disorders

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 considerated, moderately considerated and heavily considerated)
- 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

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	.....	SK 7	K 7	TK 3
		KA 5	.....	SK 9	K 9	TK 4
		KA n	.....	SK n	K 11	TK n
			Sum of the heavily WpKAs			
	Key-activities moderately considered	KA 3	.....	SK 2	K 2	TK 2
		KA 6	.....	SK 5	K 5	TK 7
		KA n	.....	SK n	K 13	TK n
			Sum of the moderately WpKAs			
	Key-activities less considered	KA 4	.....	SK 1	K 1	TK 4
		KA11	.....	SK 17	K 17	TK 11
			Sum of the less WpKAs			
			Cluster sum of WpKAs			
Additional Information	RELATIVE WEIGHT OF THE UNIT ON THE OVERALL WEIGHT OF LEARNING OUTCOMES		XX,XX %			

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

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 VET IN.HAPTIC EXPERT

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 working with students with sensory disabilities and learning disorders.

Activity Phase/ Unit	Key Acvities associated	WpKA
1 – Planning of VET In.Haptic Teaching process	KA 4 - Selection of tools and devices needed for teaching based on tactile experience combined with video-audio and touch components KA 2 - Definition of objectives to be achieved for students with sensory disabilities and learning disorders KA 1 - Definition of the studies program and of the educational path of the students with sensory disabilities and learning disorders: needs analysis	17,16 16,89 16,61
	TOTAL WpKA Activity Phase/Unit 1	**50,66**
2 – Implementation of VET In.Haptic Teaching process	KA 3 - Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences, combined also with video-audio components KA 5 - Transfer of know-how to students for the	18,65

	correct use of learning tools based on video-audio and touch components KA 7 - Organization and implementation of targeted activities and pathways, management of learning progression	17,25 15,63
	TOTAL WpKA Activity Phase/Unit 2	**51,53**
3 – Evaluation of VET In.Haptic Teaching process	KA 8 – Monitoring, verification and evaluation of the results achieved by students KA 9 - Drafting final evaluation of students	17,18 15,46
	TOTAL WpKA Activity Phase/Unit 3	**32,64**
4 – Involvement of students, parents and caregivers in In.Haptic VET Teaching process	KA 6 - Involve students in the learning process KA 10 - Information and involvement of parents and caregivers	17,12 17,11
	TOTAL WpKA Activity Phase/Unit 3	**34,23**

TOTAL WpKA	**169,06**

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 = 169,06

Total WpKA Unit 1= (50,66 * 100)/ 169,06= 29,96%

Total WpKA Unit 2= (51,53 * 100)/ 169,06= 30,48%

Total WpKA Unit 3= (32,64 * 100)/ 169,06= 19,31%

Total WpKA Unit 4= (34,23 * 100)/ 169,06= 20,25%

If we consider for the e-learning course 30 hours, we can suppose the following module structure:

Unit 1 / Module 1 = 30 hours x 29,96% = 8,99 (9 hours)

Unit 2 / Module 2 = 30 hours x 30,48% = 9,14 (9 hours)

Unit 3 / Module 3 = 30 hours x 19,31% = 5,79 (6 hours)

Unit 4 / Module 4 = 30 hours x 20,25% = 6,07 (6 hours)

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 "VET IN.Haptic Expert".**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
1 – Planning of VET In.Haptic Teaching process	Key Activities heavily considered	None was found	/	/	/	/
	Key Activities moderately considered	**KA 4** - Selection of tools and devices needed for teaching based on tactile experience combined with video-audio and touch components	17,16	**KnR 12** - Knowledge of assistive systems for the visually impaired on Apple devices – 17,48 **KnR 11** – Knowledge of assistive systems for the visually impaired on Android devices – 16,65 **KnR 9** - Knowledge of the vibrational/tactile actuators of Apple devices – 16,54 **KnR 8** - Knowledge of the	**SSR 9** - Ability to use vibrational patterns to encode information to transfer – 17,58 **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content – 17,10 **SSR 8** - Ability to use PC/tablet/smartphone for haptic teaching/training – 15,87	**TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 10** - Innovativeness / creativity – 17,45 **TSR 2** - Flexibility and adaptability – 16,11

				vibrational/tactile actuators of Android devices – 14,73	SSR 10 - ICT and all new technologies skills – 15,60	
		KA2 - Definition of objectives to be achieved for students with sensory disabilities and learning disorders	16,89	**KnR 4** - Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15 **KnR 1 -** Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low vision – 16,58 **KnR 2** - Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15** - Cognitive and	**SSR 14** - Pedagogical skills – 17,19 **SSR 12** - Ability to define user experience using tactile and audio interaction – 16,32 **SSR 1** - Project management Skills – 14,63 **SSR 2** - Information finding and analysis skills – 13,43	**TSR 7** - Empathy and active listening – 17,37 **TSR 5** - Customer focus – 17,08 **TSR 4** - Ability to motivate and inspire clients – 17,05

				coordination, design and management knowledges – 13,20		
		KA1 - Definition of the studies program and of the educational path of the students with sensory disabilities and learning disorders: needs analysis	16,61	**KnR 4** - Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15 **KnR 6** - Knowledge of techniques for developing tactile skills (Haptic technologies) – 17,18 **KnR 1** - Knowledge of vision impairment concept, general psychological aspects of the visually impaired, language and tools for the blind, low	**SSR 14** - Pedagogical skills – 17,19 **SSR 12** - Ability to define user experience using tactile and audio interaction – 16,32 **SSR 1** - Project management Skills – 14,63 **SSR 2** - Information finding and analysis skills – 13,43	**TSR 6** - Ability to cope with stress – 18,23 **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 1** - Teamwork/cooperation – 17,29 **TSR 3** - Problem solving e team working – 17,08 **TSR 5** - Customer focus – 17,08 **TSR 8** - Ability to work independently – 13,82

				vision – 16,58 **KnR 2 -** Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15 -** Cognitive and coordination, design and management knowledges – 13,20		
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	50,66				
	Sum of the less WpKAs =	0				
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE					**29,96%**
UNIT	**CATEGORICAL ANALYSIS**	**KEY ACTIVITY**	**WpKA**	**Knowledge associated - WpKnR points**	**Specific Skills Associated - WpSSR points**	**Transversal Skills Associated - WpTSR points**

2 – Implementation of VET In.Haptic Teaching Process	Key Activities heavily considerated	**KA 3** - Didactic-methodological design: preparation of lessons and related exercises/activities (training contents/materials) based on tactile experiences combined with video-audio components	18,65	**KnR 13** – Knowledge of vision simulation systems for the visually impaired – 18,56 **KnR 14** – Knowledge of text to speech and speech input recognition systems – 17,48 **KnR 6** - Knowledge of techniques for developing tactile skills (Haptic technologies) – 17,38 **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) – 17,18 **KnR 5** - Knowledge of accessibility and assistive technologies, use of tools and devices based on tactile experiences combined with video-audio components – 17,15	**SSR 7** - Ability to create and manage training contents taking into account the 3 senses (sight-hearing-touch) using tactile experiences combined with video-audio components – 19,01 **SSR 3** – Ability to create, visualise and manage training contents/materials considering video-audio and touch components – 17,48 **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content – 17,10 **SSR 5** – Ability to manage the semantics related to content delivery in	**TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 10** - Innovativeness / creativity – 17,45 **TSR 5** - Customer focus – 17,08 **TSR 8** - Ability to work independently – 13,82

				KnR 10 - Knowledge of the design tactile interfaces with vibration patterns – 16,54 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20 **KnR 3** - Knowledge of of the main computer vocabulary – 11,65	relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used – 16,91 **SSR 10** - ICT and all new technologies skills – 15,60 **SSR 2** - Information finding and analysis skills – 13,43	
	Key Activities moderately considerated	**KA5** – Transfer of know-how to students for the correct use of learning tools based on video-audio and touch components	17,25	**KnR 13** – Knowledge of vision simulation systems for the visually impaired – 18,56 **KnR 14** – Knowledge of text to speech and speech input recognition systems – 17,48 **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-	**SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time – 18,42 **SSR 9** - Ability to use vibrational patterns to encode information to transfer – 17,58	**TSR 6** - Ability to cope with stress – 18,23 **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 10** - Innovativeness / creativity – 17,45 **TSR 11** - Verbal and non-verbal communication skills – 16,69

				touch) – 17,18 **KnR 11** – Knowledge of assistive systems for the visually impaired on Android devices – 16,70 **KnR 12** - Knowledge of assistive systems for the visually impaired on Apple devices – 16,65 **KnR 10** - Knowledge of the design tactile interfaces with vibration patterns – 16,54 **KnR 8** - Knowledge of the vibrational/tactile actuators of Android devices – 14,89 **KnR 9** - Knowledge of the vibrational/tactile actuators of Apple devices – 14,73 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20	**SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content – 17,10 **SSR 8** - Ability to use PC/tablet/smartphone for haptic teaching/training – 15,87 **SSR 10** - ICT and all new technologies skills – 15,60 **SSR 2** - Information finding and analysis skills – 13,43	**TSR 2** - Flexibility and adaptability – 16,11 **TSR 8** - Ability to work independently – 13,82
		KA7 - Organization and implementation of	15,63	**KnR 4** - Knowledge of technology of touch, a.k.a.	**SSR 6** – Ability to analyze the interaction with the	**TSR 6** - Ability to cope with stress – 18,23

		targeted activities and pathways, management of learning progression		Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15 **KnR 6** - Knowledge of techniques for developing tactile skills (Haptic technologies) – 17,38 **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) – 17,18 **KnR 2** - Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15** - Cognitive and coordination, design and management knowledges –	training scenarios carried out by the user and the relative improvement trends observed over time – 18,42 **SSR 3** – Ability to create, visualise and manage training contents/materials considering video-audio and touch components – 17,48 **SSR 14** - Pedagogical skills – 17,19 **SSR 4** – Ability to use video content or with 3D interaction, audio tracks, acoustic-vibrational patterns, binaural ASMR/audio content – 17,10 **SSR 11** - Ability to evaluate user feedback from a tactile interaction – 17,01 **SSR 5** – Ability to manage	**TSR 10** - Innovativeness / creativity – 17,45 **TSR 7** - Empathy and active listening – 17,37 **TSR 1** - Teamwork/cooperation – 17,29 **TSR 3** - Problem solving e team working – 17,08 **TSR 5** - Customer focus – 17,08 **TSR 11** - Verbal and non-verbal communication skills – 16,69 **TSR 2** - Flexibility and adaptability – 16,11

				13,20	the semantics related to content delivery in relation to the type of different ability of the subject and the expected KPIs of educational transfer in relation to the content used – 16,91 **SSR 13** - Ability to share tactile experiences and lessons in a community – 16,82 **SSR 1** - Project management Skills- 14,63 **SSR 2** - Information finding and analysis skills – 13,43	
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	18,65				
	Sum of the moderately WpKAs =	32,88				

	Sum of the less WpKAs =	0	
		RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE	**30,48%**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
3 – Evaluation of VET In.Haptic Teaching process	Key Activities heavily considerated	None was found	/	/	/	/
	Key Activities moderately considerated	**KA8** - Monitoring, verification and evaluation of the results achieved by students	17,18	**KnR 4** - Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15 **KnR 6** - Knowledge of techniques for developing tactile skills (Haptic technologies) – 17,38	**SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time – 18,42 **SSR 14** - Pedagogical skills – 17,19 **SSR 11** - Ability to evaluate user feedback from a tactile interaction	**TSR 6** - Ability to cope with stress – 18,23 **TSR 4** - Ability to motivate and inspire clients – 17,05 **TSR 11** - Verbal and non-verbal communication skills – 16,69

				KnR 7 - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) – 17,18 **KnR 2** - Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20	– 17,01 **SSR 1** - Project management Skills – 14,63	
		KA9 - Drafting final evaluation of students	15,46	**KnR 4** - Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15	**SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time – 18,42 **SSR 11** - Ability to evaluate user feedback	**TSR 5** - Customer focus – 17,08 **TSR 9** - Trust building ability/ reliability – 16,65

				KnR 6 - Knowledge of techniques for developing tactile skills (Haptic technologies) – 17,38 **KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) – 17,18 **KnR 2** - Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20	from a tactile interaction – 17,01 **SSR 10** - ICT and all new technologies skills – 15,60 **SSR 2** - Information finding and analysis skills – 13,43	
	Key Activities less considerated	None was found	/	/	/	/
Additi	Sum of the heavily WpKAs =	0				

	Sum of the moderately WpKAs =	32,64	
	Sum of the less WpKAs =	0	
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE		**19,31%**

UNIT	CATEGORICAL ANALYSIS	KEY ACTIVITY	WpKA	Knowledge associated - WpKnR points	Specific Skills Associated - WpSSR points	Transversal Skills Associated - WpTSR points
4 – Involvement of students, parents and cargivers in VET In.Haptic Teaching process	Key Activities heavily considerated	None was found	/	/	/	/
	Key Activities moderately considerated	**KA6** - Involve students in the learning process	17,12	**KnR 4** - Knowledge of technology of touch, a.k.a. Haptics, applied to education and training: roles that haptics can play in a multisensory context, approaches for creating haptic content, haptic interactions – 18,15 **KnR 1** - Knowledge of vision impairment concept,	**SSR 6** – Ability to analyze the interaction with the training scenarios carried out by the user and the relative improvement trends observed over time – 18,42 **SSR 14** - Pedagogical skills – 17,19 **SSR 11** - Ability to	**TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 7** - Empathy and active listening – 17,37 **TSR 5** - Customer focus – 17,08

				general psychological aspects of the visually impaired, language and tools for the blind, low vision – 16,58 **KnR 2** - Knowledge of European and National legislation on school inclusion – 13,22 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20	evaluate user feedback from a tactile interaction – 17,01 **SSR 13** - Ability to share tactile experiences and lessons in a community – 16,82	**TSR 4** - Ability to motivate and inspire clients – 17,05 **TSR 11** - Verbal and non-verbal communication skills – 16,69 **TSR 9** - Trust building ability/ reliability – 16,65
		KA10 - Information and involvement of parents and caregivers	17,11	**KnR 7** - Knowledge of hybrid cross-platform application that can be used by mobile devices, capable of presenting information content taking into account the 3 senses (sight-hearing-touch) – 17,18 **KnR 2** - Knowledge of European and National legislation on school	**SSR 14** - Pedagogical skills – 17,19 **SSR 11** - Ability to evaluate user feedback from a tactile interaction – 17,01 **SSR 13** - Ability to share tactile experiences and lessons in a community – 16,82 **SSR 1** - Project	**TSR 6** - Ability to cope with stress – 18,23 **TSR 12** - Ability to build, manage and support relationships with people in training with sensory disabilities and learning disorders – 18,14 **TSR 3** - Problem solving e team working – 17,08 **TSR 11** - Verbal and non-

				inclusion – 13,22 **KnR 15** - Cognitive and coordination, design and management knowledges – 13,20	management Skills – 14,63	verbal communication skills – 16,69
	Key Activities less considerated	None was found	/	/	/	/
Additional information	Sum of the heavily WpKAs =	0				
	Sum of the moderately WpKAs =	34,23				
	Sum of the less WpKAs =	0				
	RELATIVE WEIGHT OF THE PHASE ON THE OVERALL WEIGHT OF PROFILE					**20,35%**

5 ANNEX N. A: QUESTIONNAIRE

JOB ANALYSIS QUESTIONNAIRE OF THE VET IN.HAPTIC EXPERT

ANNEX A

PROJECT NUMBER 2021-1-PL01-KA220-VET-000033182

JOB ANALYSIS QUESTIONNAIRE OF THE VET IN.HAPTIC EXPERT

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 pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders.

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 VET IN.HAPTIC EXPERT

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 working with students with sensory disabilities and learning disorders:
4. How many hours per week do you work with students?
5. Did you get any relevant trainings in the field of pedagogical models and cognitive learning strategies based on tactile experiences for students with sensory disabilities and learning disorders? (yes/No) If yes, what kind of training? _____

Key Activities Required

Analyze the key activities required for the **USE OF PEDAGOGICAL MODELS AND COGNITIVE LEARNING STRATEGIES BASED ON TACTILE EXPERIENCES** 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

https://inhapticvet.eu