



## Del.3: Country report

Project: Practical Methodology for Acquiring Key Competences of European Reference Framework through Continuous Vocational Education and Training, PR-ERF  
Project number: 2013-1-SE1-LEO05-15265

Survey of curricula and methodologies on 8 ERF Key Competences for Personal Assistants

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## 1. METHODOLOGY OF THE RESEARCH

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### 1.1 Introduction

This research is done within the project Practical Methodology for Acquiring Key Competences of European Reference Framework through Continuous Vocational Education and Training; project acronym is PR-ERF. The project is implemented within the Lifelong Learning Program, Leonardo da Vinci sub-program.

The aim of the project is to develop the holistic methodology for recognition and development of 8 ERF Key Competences as a package of *Skills, Knowledge* and *Attitudes* that all individuals need to acquire through CVET for personal fulfilment, development, inclusion and employment. The proposed methodology will be linked to *level 4 of European Qualification Framework* in order to be compatible with CVET requirements. The methodology will comprise an assessment tool to validate competences according to EQF level 4 and identify the gaps towards the CVET program.

PR-ERF curriculum is sector specific and will be adapted to the field Personal Assistant.

### 1.2 Methodology of the research

1.2.1. The goal of the research is to collect the best practices and examples of curriculum for 8 ERF Key Competences related to the field Personal Assistant. Each partner organisation collects the available curriculum for those key competences the organisation is responsible for according to the agreement at the kick-off meeting in Nicosia, namely:

**DOCUMENTA:**

Social/Civic  
Cultural and social awareness

**DIMITRA:**

Digital  
Entrepreneurship

**FOLKUNVIERSITETET:**

Foreign languages  
Mathematics

**REVALENTO:**

Learning to learn

**MMC:**

Mother tongue

1.2.2. The proposed methods for the research are the following:

**Desk research:** each partner organisation is responsible for collecting curriculum for those ERF competences they are responsible for (please see 1.2.1) in relation to personal assistant profession (if relevant). If there are no curricula available with focus on personal assistant profession general ERF curriculum shall be collected. The research shall be done on Internet and on the web-sites of VET providers / adult education providers as well as other stakeholders working with ERF. Taking into consideration copy right principle the partnership is obliged to get the permission of the above stakeholders in regards to presenting their curriculum in the national reports of partner organisations.

**Interviews with experts:** each partner organisation is responsible to interview the regional expert groups in regards to the relevance of the collected curriculum for the competence development of the personal assistants. The expert group shall comprise CVET teachers, CVET students, relevant decision-makers, employers, Public Employment Services and other relevant stakeholders. The expert group shall also give their feedback in regards to which Key Competences are relevant for the profession of personal assistant and how they can be acquired through PR-ERF curriculum.

**Other additional methods** for the research such as questionnaires can be used by the partners if there is a need. The partners shall include those methods in the final national report.

1.2.3 The geographical scope of the research is European level, meaning that each partner organisation will make a survey not only in their countries but also in other European countries (if relevant). The partnership is responsible to support each other in this part of research in case other partners find curriculum for their respective key competences.

## 2 SURVEY ON TRAINING COURSES RELEVANT TO THE FIELD “PERSONAL ASSISTANT” (8 KEY COMPETENCES)

### 2.1 RESUME

No	KC <sup>1</sup>	NAME OF THE TRAINING COURSE	GENERAL AIM	TARGET <sup>2</sup>	GENERAL CONTENTS <sup>3</sup>	FORMAT & LANGUAGE <sup>4</sup>	DURATION
1	2	English B1	Pre-advanced 1	Students, Individuals with basic English knowledge	<ul style="list-style-type: none"> <li>- Grammar at a pre-advanced level</li> <li>- Everyday conversation</li> <li>- Increase vocabulary</li> <li>- Listening comprehension, dictation and text reading</li> <li>- Cultural and social conditions</li> <li>- Attitudes</li> </ul>	Class training PT English	12 times (2 hours each time)
2	2	English B2	Pre-advanced 2	Students, Individuals with pre-advanced English knowledge	<ul style="list-style-type: none"> <li>- Grammar at a more advanced level</li> <li>- Everyday conversation at more advance level</li> <li>- Increase vocabulary</li> <li>- Listening comprehension, dictation and text reading</li> <li>- Cultural and social conditions</li> <li>- Attitudes</li> </ul>	Class training PT English	12 times (2 hours each time)
3	2	Communicational English	Advanced	Students, Individuals with more advanced English knowledge	Free communication on the events, points of view, planning and hopefully feelings	Class training PT English	12 times (2 hours each time)
4		English, general course	Basic course	Students with basic knowledge of English	<ul style="list-style-type: none"> <li>- Grammar and language knowledge</li> <li>- Oral and written presentations</li> <li>- Independent work, critical thinking and analytical skills</li> </ul>	Distance Swedish	One semester 25 %
5	3	Maths GCSE at Leeds City College, UK	To provide the qualification of GCSE in Mathematics A	Those, fitting the requirement of fluency in using basic numbers and measures	<ul style="list-style-type: none"> <li>• Number</li> <li>• Algebra</li> <li>• Geometry</li> <li>• Measures</li> <li>• Statistics</li> </ul>	Part-Time, English	1 year (31 weeks)

<sup>1</sup>Please write her the Number of the Key Competence that the content of this training course is relevant to

<sup>2</sup> To whom is the training directed to? What is the education level needed? (if any)

<sup>3</sup> General contents: main modules

<sup>4</sup> FORMAT: Full Time (FT) / Part Time (PT) / On-line (OL) / Mixed between.... (whatever of those 3)

No	KC <sup>1</sup>	NAME OF THE TRAINING COURSE	GENERAL AIM	TARGET <sup>2</sup>	GENERAL CONTENTS <sup>3</sup>	FORMAT & LANGUAGE <sup>4</sup>	DURATION
				with an understanding of basic concepts.	<ul style="list-style-type: none"> <li>• Probability</li> </ul> For higher tier trigonometry, vectors, functions and more complex algebra are also covered.		
6	3	<b>GCSE Maths at Preston's college, UK</b>	To provide a key qualification, achievement of which can be the key to a successful career for many people	Adults, who obtained GCSE Maths Grade D within the last 5 years or Functional Skills Maths Level 2 plus satisfactory completion of initial and diagnostic assessments.	The course is split into three modules: <ul style="list-style-type: none"> <li>• Statistics &amp; Number</li> <li>• Number &amp; Algebra</li> <li>• Algebra &amp; Geometry</li> </ul>	Part-time, English	1 year (intensive nine month course)
7	3	<b>Mathematics. Bildungsgänge der Fachoberschule</b>	To give the professional knowledge and mediate the acquisition of the college entrance permit (FHR)	Those: <ol style="list-style-type: none"> <li>1. After conditioning C 9 of the training and testing order (APO-BK) NRW</li> <li>2. After conditioning C 10, C 11 of the Education and Examination Regulations (APO-BK) NRW</li> <li>3. After at least two years of professional training and the professional</li> </ol>	<ul style="list-style-type: none"> <li>• Basic skills in switching from formulas and equations in resolving bracket terms</li> <li>• Sets of numbers, definition and sets of values, concept of function</li> <li>• Linear Functions and Systems of Linear Equations</li> <li>• Quadratic Functions and Equations.</li> <li>• Basic working and mathematical thought processes</li> <li>• Developing clear terms, a logical reasoning and systematic, inductive and deductive, sometimes heuristic approach</li> <li>• Familiarity with the mathematical jargon</li> <li>• Multiple directional problems</li> <li>• Modelling real situations</li> <li>• Transferring complex mathematical procedures on different occasions directional problems</li> </ul>	Part-time or Full-time	1 or 2 years

No	KC <sup>1</sup>	NAME OF THE TRAINING COURSE	GENERAL AIM	TARGET <sup>2</sup>	GENERAL CONTENTS <sup>3</sup>	FORMAT & LANGUAGE <sup>4</sup>	DURATION
				knowledge			
8	3	<b>Curriculum by Ministry of the French Community, Belgium</b>	To provide final skills and common knowledge for joint training of vocational and technical education qualification	<ul style="list-style-type: none"> <li>• For students who would benefit from this kind of thinking and use math in citizen life.</li> <li>• For students who use math in one area or another.</li> <li>• For students who have training in science, technology, research, areas in which mathematics plays an essential role.</li> </ul>	<ul style="list-style-type: none"> <li>• Study of functions</li> <li>• Algebra</li> <li>• Geometry and trigonometry</li> <li>• Data processing</li> </ul>	N/A	N/A
9		<b>Mathematical literacy and basic competences in science and technology (EQLearn)</b>	To improve mathematical literacy, scientific literacy and knowledge of technology among disadvantaged groups so that they can integrate into	ANY disadvantaged group	<ul style="list-style-type: none"> <li>• Computation methods</li> <li>• Algebra</li> <li>• Percentages</li> <li>• Ratios</li> <li>• Percent Ratios</li> <li>• Mathematical Presentation</li> <li>• Geometry</li> </ul>	Part-time, English, Greek, Slovene	Individual

No	KC <sup>1</sup>	NAME OF THE TRAINING COURSE	GENERAL AIM	TARGET <sup>2</sup>	GENERAL CONTENTS <sup>3</sup>	FORMAT & LANGUAGE <sup>4</sup>	DURATION
			the society and labour market		<ul style="list-style-type: none"><li>• Scientific Literacy</li><li>• Technology</li><li>• Science vs Technology</li><li>• Relationships</li></ul>		

Add as many files as needed (as trainings found)



## 2.2 DETAILED INFORMATION

**NAME OF THE TRAINING:** English B1

**REFERENCE (REF):** 1

<b>GENERAL AIM</b>	English for basic everyday communication
<b>SPECIFIC AIMS:</b>	<ul style="list-style-type: none"> <li>*To understand clear conversations in standard situations in everyday life, school, work and free time.</li> <li>*To manage the most of the situations in the English-speaking countries.</li> <li>*To prepare the dialogue on the common topics or the topics of the personal interests of participants (family, work, trips)</li> <li>*To use common phrases to describe the participants' dreams, plans and experiences.</li> <li>* To give reasons and arguments for participants' points of view.</li> </ul>
<b>DETAILED TARGET:</b>	Students Individuals with basic English knowledge
<b>DETAILED CONTENTS:</b>	<ul style="list-style-type: none"> <li>- Grammar at a pre-advanced level</li> <li>- Everyday conversation</li> <li>- Increase vocabulary</li> <li>- Listening comprehension, dictation and text reading</li> <li>- Cultural and social conditions</li> <li>- Attitudes</li> </ul>
<b>TRAINING METHODOLOGY:</b>	Class training, dialogues, written and oral exercises
<b>DURATION:</b>	12 times (2 hours each time)
<b>WEBSITE:</b>	<a href="http://www.folkuniversitetet.se/Las-mer-om-sprak/Europeiska-referensramen-for-sprak/">http://www.folkuniversitetet.se/Las-mer-om-sprak/Europeiska-referensramen-for-sprak/</a>
<b>CONTACT:</b>	<a href="mailto:info.uppsala@folkuniversitetet.se">info.uppsala@folkuniversitetet.se</a>
<b>WHY YOU CHOOSE IT:</b>	The course is aimed at practical second language acquisition. This course is taken as an example in language training provided by Folkuniversitetet. There are levels A1, A1+, A2, A2+, B1, B1+, B2, B2+, C1, C1+, C2, C2+, English for communication, writing English. The similar courses are developed for other foreign languages (40 languages).

**NAME OF THE TRAINING:** English B2

**REFERENCE (REF):** 2

<b>GENERAL AIM</b>	English for pre-advanced communication in everyday and professional life
<b>SPECIFIC AIMS:</b>	<ul style="list-style-type: none"> <li>*To follow complex conversations in concrete and abstract conversations.</li> <li>*Understanding of the professional terminology within a specific field.</li> <li>*To participate freely in the spontaneous conversations without problems.</li> <li>*To express thoughts freely and clearly in different subjects and to discuss pro- and cons solutions.</li> </ul>
<b>DETAILED TARGET:</b>	Students Individuals with pre-advanced English knowledge
<b>DETAILED CONTENTS:</b>	<ul style="list-style-type: none"> <li>- Grammar at a more advanced level</li> <li>- Everyday conversation at more advance level</li> <li>- Increase vocabulary</li> <li>- Listening comprehension, dictation and text reading</li> <li>- Cultural and social conditions</li> <li>- Attitudes</li> </ul>

<b>TRAINING METHODOLOGY:</b>	Class training, dialogues, written and oral exercises
<b>DURATION:</b>	12 times (2 hours each time)
<b>WEBSITE:</b>	<a href="http://www.folkuniversitetet.se/Las-mer-om-sprak/Europeiska-referensramen-for-sprak/">http://www.folkuniversitetet.se/Las-mer-om-sprak/Europeiska-referensramen-for-sprak/</a>
<b>CONTACT:</b>	<a href="mailto:info.uppsala@folkuniversitetet.se">info.uppsala@folkuniversitetet.se</a>
<b>WHY YOU CHOOSE IT:</b>	The course is aimed at practical second language acquisition. This course is taken as an example in language training provided by Folkuniversitetet. There are levels A1, A1+, A2, A2+, B1, B1+, B2, B2+, C1, C1+, C2, C2+, English for communication, writing English. The similar courses are developed for other foreign languages (40 languages).

**NAME OF THE TRAINING: Communicational English**

REFERENCE (REF): 3

<b>GENERAL AIM</b>	Advanced communication in English in everyday and professional life
<b>SPECIFIC AIMS:</b>	*To follow and lead communication on the events, points of view, planning and feelings.
<b>DETAILED TARGET:</b>	Students Individuals with more advanced English knowledge
<b>DETAILED CONTENTS:</b>	Free communication on the events, points of view, planning and hopefully feelings
<b>TRAINING METHODOLOGY:</b>	Class training, dialogues, role plays, written and oral exercises
<b>DURATION:</b>	12 times (2 hours each time)
<b>WEBSITE:</b>	<a href="http://www.folkuniversitetet.se/Kurser--Utbildningar/Sprakkurser/Engelska/Engelska-konversation/">http://www.folkuniversitetet.se/Kurser--Utbildningar/Sprakkurser/Engelska/Engelska-konversation/</a>
<b>CONTACT:</b>	<a href="mailto:info.uppsala@folkuniversitetet.se">info.uppsala@folkuniversitetet.se</a>
<b>WHY YOU CHOOSE IT:</b>	The course is aimed at practical second language acquisition. This course is taken as an example in language training provided by Folkuniversitetet. There are levels A1, A1+, A2, A2+, B1, B1+, B2, B2+, C1, C1+, C2, C2+, English for communication, writing English. The similar courses are developed for other foreign languages (40 languages).

**NAME OF THE TRAINING: English, general course**

REFERENCE (REF): 4

<b>GENERAL AIM</b>	General English knowledge and skills for independent oral and written presentation and communication
<b>SPECIFIC AIMS:</b>	*To get a sufficient grammar and language knowledge and skills for independent work, critical thinking and analytical skills in the English language. *Oral and written presentations within the specific and professional fields.
<b>DETAILED TARGET:</b>	Students with basic knowledge of English
<b>DETAILED CONTENTS:</b>	- Grammar and language knowledge - Oral and written presentations Independent work, critical thinking and analytical skills
<b>TRAINING METHODOLOGY:</b>	Distant training, written and audio exercises
<b>DURATION:</b>	One semester 25 %

<b>WEBSITE:</b>	<a href="http://lnu.se/utbildning/kurser/1en117">http://lnu.se/utbildning/kurser/1en117</a>
<b>CONTACT:</b>	<a href="mailto:helen.hippach@lnu.se">helen.hippach@lnu.se</a>
<b>WHY YOU CHOOSE IT:</b>	The course is aimed at students to develop their independent development and critical thinking. This is a necessary prerequisite for the students to become employable from day one after graduation. This is in line with the ERF KC2 for CVET students.

**NAME OF THE TRAINING:** Maths GCSE at Leeds City College, UK

**REFERENCE (REF):** 5

<b>GENERAL AIM</b>	To provide the qualification of GCSE in Mathematics A
<b>SPECIFIC AIMS:</b>	<ul style="list-style-type: none"> <li>To prepare and support students in developing a broad range of mathematical skills and reinforce essential understanding which will allow them to solve real-world problems in a structured way.</li> <li>To develop fluency and competency in mathematical calculations and problem solving to enable progression which will allow further study and employment.</li> </ul>
<b>DETAILED TARGET:</b>	From youngsters to adults. Although, to begin the GCSE course one should already be fluent in using basic number and measure with an understanding of basic concepts.
<b>DETAILED CONTENTS:</b>	N/A
<b>TRAINING METHODOLOGY:</b>	<p>Students learn through class-based teaching, group activities, homework and by using online resources outside of the classroom.</p> <p>During the course individual tutor gives class assignments and homework. Individual tutor also gives their student regular feedback to ensure he or she knows how they are progressing and provides support for the skills areas the student needs to develop.</p>
<b>DURATION:</b>	1 year (31 weeks)
<b>WEBSITE:</b>	<a href="http://www.leedscitycollege.ac.uk/courses/fe_course.php?course_id=33&amp;pagenumber=0&amp;tab=all&amp;atten=Any">http://www.leedscitycollege.ac.uk/courses/fe_course.php?course_id=33&amp;pagenumber=0&amp;tab=all&amp;atten=Any</a>
<b>CONTACT:</b>	<a href="http://www.leedscitycollege.ac.uk/index.php/about/enquiry-form/">http://www.leedscitycollege.ac.uk/index.php/about/enquiry-form/</a>
<b>WHY YOU CHOOSE IT:</b>	<ul style="list-style-type: none"> <li>GCSE is a recognised qualification required for many areas of study and employment.</li> <li>GCSE Maths grade C is often required for entry to university and employment.</li> </ul>

**NAME OF THE TRAINING:** GCSE Maths at Preston's college, UK

**REFERENCE (REF):** 6

<b>GENERAL AIM</b>	To provide a key qualification, achievement of which can be the key to a successful career for many people
<b>SPECIFIC AIMS:</b>	N/A
<b>DETAILED TARGET:</b>	N/A
<b>DETAILED CONTENTS:</b>	N/A
<b>TRAINING METHODOLOGY:</b>	Classroom-based teaching using a variety of resources including workbooks and computer-based activities. Homework will be set, completion of which will be expected by agreed deadlines
<b>DURATION:</b>	1 year (intensive nine month course)

<b>WEBSITE:</b>	<a href="http://www.preston.ac.uk/course/gcse-maths/">http://www.preston.ac.uk/course/gcse-maths/</a>
<b>CONTACT:</b>	<a href="http://www.preston.ac.uk/contact-us/">http://www.preston.ac.uk/contact-us/</a>
<b>WHY YOU CHOOSE IT:</b>	Students achieve a nationally recognised qualification that is required for many jobs and university courses.

**NAME OF THE TRAINING:** Mathematik. Bildungsgänge der Fachoberschule, Germany

**REFERENCE (REF):** 7

<b>GENERAL AIM</b>	Give the professional knowledge and mediate the acquisition of the college entrance permit (FHR).
<b>SPECIFIC AIMS:</b>	N/A
<b>DETAILED TARGET:</b>	N/A
<b>DETAILED CONTENTS:</b>	<p>Grade 11</p> <p>As part of the 11th grade or a relevant vocational training the students' knowledge in the subject area analysis should consolidate the following topics based on job-related tasks:</p> <ul style="list-style-type: none"> <li>• Basic skills in switching from formulas and equations in resolving bracket terms and dealing with powers, especially with powers of ten</li> <li>• Sets of numbers, definition and sets of values, concept of function</li> <li>• Linear Functions and Systems of Linear Equations</li> <li>• Quadratic Functions and Equations.</li> </ul> <p>Grade 12</p> <p>Based on the college entrance and the deep professional knowledge the following qualifications and skills will be sought in the grade. The students should:</p> <ul style="list-style-type: none"> <li>• be familiar with basic working and mathematical thought processes and thereby develop a basic understanding of a goal-oriented and problem-oriented work with mathematics,</li> <li>• be capable of developing clear terms, logical reasoning and systematic, inductive and deductive, sometimes heuristic approaches</li> <li>• be familiar with mathematical jargon and realization that uniqueness, consistency, and completeness of the verbalisation of directional and mathematical aspects, which is essential for mental penetration</li> <li>• be capable of solving multiple directional problems (mathematically represented in graphical and analytical forms) by appropriate methods,</li> <li>• be able to model real situations ,</li> <li>• be able to present, interpret and evaluate the results of their activities.</li> </ul> <p>Liabilities of the Theme Analysis (functions, differential and integral calculus) is supplemented by at least two different functional classes.</p> <p>In addition, depending on the profile and professional focus the other from the following topics are mandatory:</p> <ul style="list-style-type: none"> <li>• Linear Algebra</li> <li>• Analytic Geometry</li> <li>• Complex account</li> <li>• Stochastic</li> <li>• Numerical Mathematics</li> </ul> <p>Grade 13</p> <p>In the 13th grade, the syllabus is designed to specify the requirements for the targeted study skills as well as in-depth professional knowledge using appropriate problem</p>

	<p>situations.</p> <p>Thanks to increasingly complex and sophisticated themes and working methods, advanced knowledge and performance skills are developed.</p> <p>In the field of mathematics, this means a significant expansion of the acquired in the 12th grade skills and qualifications.</p> <p>Here students</p> <ul style="list-style-type: none"> <li>• transfer complex mathematical procedures on different occasions directional problems, capture this mathematically represented in graphical and analytical form and develop appropriate model concepts,</li> <li>• self-edit multiple directional complex tasks; find appropriate models for solutions, justifications and ratings</li> <li>• present work results, defend, interpret and evaluate.</li> </ul> <p>In addition, depending on the profile and the professional focus, one of the following topics needs to be passed:</p> <ul style="list-style-type: none"> <li>• Linear Algebra</li> <li>• Analytic Geometry</li> <li>• Stochastic</li> <li>• Numerical Mathematics</li> <li>• Complex calculation</li> <li>• Power series expansion</li> <li>• Differential Equations</li> </ul>
<b>TRAINING METHODOLOGY:</b>	<p>The topics to be covered are approached by interdisciplinary collaboration with different occupations subjects of early and inter-professional range.</p> <p>Professional references to the concrete experiences of the learners can be described by the selection and use of current and authentic materials, and possibly also through direct contacts with companies and institutions or through Internet contacts.</p>
<b>DURATION:</b>	1 or 2 years
<b>WEBSITE:</b>	<a href="http://www.berufsbildung.nrw.de/cms/lehrplaene-und-richtlinien/fachoberschule/">http://www.berufsbildung.nrw.de/cms/lehrplaene-und-richtlinien/fachoberschule/</a> <a href="http://www.berufsbildung.schulministerium.nrw.de/cms/upload/_lehrplaene/d/mathe-fos_40010.pdf">http://www.berufsbildung.schulministerium.nrw.de/cms/upload/_lehrplaene/d/mathe-fos_40010.pdf</a>
<b>CONTACT:</b>	<a href="http://www.berufsbildung.nrw.de/cms/cms/kontakt.html">http://www.berufsbildung.nrw.de/cms/cms/kontakt.html</a>
<b>WHY YOU CHOOSE IT:</b>	The students acquire subject-specific, basic technical and methodological skills in mathematics and thereby develop a basic understanding of goal-oriented and problem-oriented work with math, which are the demanded requirements for a university or technical college degree and further professional development.

**NAME OF THE TRAINING:** Curriculum by Ministry of the French Community, Belgium

**REFERENCE (REF):** 8

<b>GENERAL AIM</b>	To provide final skills and common knowledge for joint training of vocational and technical education qualification
<b>SPECIFIC AIMS:</b>	N/A
<b>DETAILED TARGET:</b>	N/A
<b>DETAILED CONTENTS:</b>	<p>1. STUDY OF FUNCTIONS</p> <p>The study of functions is a primary area to learn.</p>

The use of graphing calculators and computers open opportunities for conjecture, easy calculations and validation.  
The technical, graphical representation, computational virtuosity are not goals themselves.  
The emphasis is on the functions of reference, linking of concepts and their interpretation. The concept of reference functions gives way to a more general concept and tools of analysis: the calculation of limits, the computation of derivatives, integral calculus, calculus.

## 2. ALGEBRA

Algebraic skills based on the ability to translate a situation in mathematical language. Their implementation requires not just knowing calculation routines, but also being able to develop and carry out plans for calculating a useful solution.

The study of matrices and complex numbers integrates algebraic, geometric and trigonometric knowledge. It includes the linking of algebraic operations, algebraic and trigonometric expressions, representations and geometric interpretations.

## 3. GEOMETRY AND TRIGONOMETRY

Geometric skills build on the knowledge of figures and planes.

Some concepts are the basis of geometric and trigonometric skills: incidence, Thales' theorem, similarity of figures and the Pythagorean theorem are used in various fields. Computational skills relating thereto are then amplified by the vector or analytic geometry.

The extension to space brings new skills: first, representation in terms of non-planar figures, then the revision of primitive notions accepted as true and most essentially, in geometrical work, acquisition various methods of reasoning and demonstration.

Skills related to the argumentation are at the heart of any geometrical activity. They are at work in the construction and justification of constructions in the search properties and writing demonstrations.

Translations, symmetries, rotations and dilations are used to describe and organize the properties of shapes and also to illustrate the concept of group as examples and counter-examples. Translations, symmetries and affinity binding geometry analysis and algebra transformation graph scaling. They are part of everyday life: guide and map reading, projections onto a plane, turning units on a chart axis, describing the symmetry of a plane graph etc.

## 4. DATA PROCESSING

In essence, the study of statistics and probability is based on examples of comparisons. Teaching process goes through interdisciplinary activities, reading graphics, processing raw data recorded or bringing students to evaluate benefits and limitations of statistics or probabilities. The goal is not in building sophisticated mathematical models. Instead, an experimental approach is suggested, in which intuitive, widely used modern means of calculation are adopted.

	<p>With regards to statistics, final skills are the same for all students. Students of Secondary Education and Transition will master a common core of mathematics students. This goal will be fully achieved insofar as this approach will resonate in other courses.</p> <p>Every student will get acquainted with notions of probability. In some cases, the mathematical model is more complex, differentiated skill level is required depending on the options.</p>
<b>TRAINING METHODOLOGY:</b>	<p>To teach mathematics that have meaning and thus fight against a dogmatic vision of mathematics, it is necessary to emphasize the role of problems in the emergence of concepts.</p> <p>These problems, including statements that sometimes seem distant from the mathematical field, play an important role in the humanist culture and scientific training.</p> <p>Necessity to know history of a culture applies to all students.</p> <p>The following list is not exhaustive and other subjects may be added. In addition, each subject does not have to be addressed. This list invites teachers to incorporate elements of the history of mathematics in learning and evaluation.</p> <ul style="list-style-type: none"> <li>• The existence of irrational numbers: the proof of the irrationality of 2 and the link with the Pythagorean Theorem.</li> <li>• Conical: viewed as the result of a cone section by different planes.</li> <li>• The great Greek problems: the golden ratio, the trisection of an angle, squaring the circle and calculating the number <math>\pi</math>, the duplication of the cube.</li> <li>• The discovery of the notion of integral and derivative: some procedures using infinitely small foreshadow the calculation of the integrals and derivatives ; they raise issues of rigor and merit.</li> <li>• The planar representation of figures in space</li> <li>• The role of structures in the theoretical development of mathematics in "mathematics science" only, limited to either basic structure (group, vector space ... ).</li> <li>• Elements of astronomy: geometry and trigonometry help in some situations fostering a better understanding of astronomical facts .</li> </ul>
<b>DURATION:</b>	N/A
<b>WEBSITE:</b>	<a href="http://www.enseignement.be/index.php/index.php?page=25279">http://www.enseignement.be/index.php/index.php?page=25279</a> <a href="http://www.enseignement.be/download.php?do_id=503&amp;do_check=">http://www.enseignement.be/download.php?do_id=503&amp;do_check=</a>
<b>CONTACT:</b>	<p>Service général du Pilotage du système éducatif          Service d'appui des Commissions des programmes          Monsieur Yves VANDENBOSSCHE, Directeur          Boulevard du Jardin Botanique, 20-22          1000 BRUXELLES          Tél: 02/690.81.82          Fax: 02/690.82.39          yves.vandenbossche@cfwb.be</p>
<b>WHY YOU CHOOSE IT:</b>	All schools must follow the programs of study approved by the Ministry

**NAME OF THE TRAINING:** Mathematical literacy and basic competences in science and technology (within EQLearn: Learning for Equality and Empowerment Learning for ALL)

**REFERENCE (REF):** 9

<b>GENERAL AIM</b>	To improve mathematical literacy, scientific literacy and knowledge of technology among disadvantaged groups so that they can integrate into the society and labour market
<b>SPECIFIC AIMS:</b>	<ul style="list-style-type: none"> <li>• Develop understanding of numbers</li> <li>• Improve computation methods (addition, Subtraction, Multiplication, Division)</li> <li>• Understand percentages and ratios</li> <li>• Understand graphs, Formulas and Statistics</li> <li>• Familiarise with Geometry and Algebra</li> <li>• Understand the meaning of science and technology and the difference between them.</li> <li>• Understand the relationship of technology and society as well as technology and culture.</li> <li>• Understand the relationship between technology and the environment</li> </ul>
<b>DETAILED TARGET:</b>	The course takes into consideration the characteristics of different disadvantaged groups, but at the same time is applicable to any disadvantaged group
<b>DETAILED CONTENTS:</b>	<p><b>Lesson 1: Mathematical literacy</b></p> <ul style="list-style-type: none"> <li>• <b>Introduction</b> Definition</li> <li>• <b>Computation methods</b> Addition and Subtraction examples glossary Multiplication and division Multiplication Times Tables grid Multiplication methods and tips Division Multiplication and Division glossary</li> <li>• <b>Algebra</b> Symbols</li> <li>• <b>Percentages</b> Methods and examples</li> <li>• <b>Ratios</b> method and examples</li> <li>• <b>Percent Ratios</b></li> <li>• <b>Mathematical Presentation</b> Graphs Formulas Statistics</li> <li>• <b>Geometry</b> Point Line Angle Pythagorean Theorem</li> </ul> <p><b>Lesson 2: Science and technology</b></p>



	<ul style="list-style-type: none"> <li>• <b>Scientific Literacy</b> Definition</li> <li>• <b>Technology</b> Definition Advantages and disadvantages History of Technology Types of technology</li> <li>• <b>Science vs Technology</b></li> <li>• <b>Relationships</b> Technology and society Technology and Culture Technology and Environment</li> </ul>
<b>TRAINING METHODOLOGY:</b>	<p>Specifically developed E-learning platform, which can be accessed at <a href="http://www.eqlearn.eu/courses/EQLearn_courses.swf">http://www.eqlearn.eu/courses/EQLearn_courses.swf</a> (password needed)</p> <p>The innovation of this solution is that it is ONE-TO-ONE SOLUTION, i.e. it differentiates itself according to the profile of the user (i.e. member of the disadvantaged group, learning pace, learning style etc). The main differentiation is in the methodological tools used (while the curriculum is the same for all disadvantaged groups)</p>
<b>DURATION:</b>	Individual
<b>WEBSITE:</b>	<a href="http://www.eqlearn.eu">http://www.eqlearn.eu</a>
<b>CONTACT:</b>	<p>MEDITERRANEAN MANAGEMENT CENTRE 16 Imvrou Street Ayios Antonios, Nicosia, Cyprus Tel: 00357 22 466636 (international), 77777252, Fax: 00357 22 466635 Email: <a href="mailto:training@mmclearningsolutions.com">training@mmclearningsolutions.com</a>, <a href="mailto:eu@mmclearningsolutions.com">eu@mmclearningsolutions.com</a></p>
<b>WHY YOU CHOOSE IT:</b>	The content suits what we believe is necessary for personal assistant within this competence (key competence #3 mathematics)

### 3. RECOMMENDATIONS BY STAKEHOLDERS

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#### 1. Please describe shortly the main recommendations of the stakeholders in regards to curriculum for the Key Competences

##### *Sweden and ERF Key Competences*

In Sweden the discussion and analysis of results and performance has a long time largely been language and mathematics. Criticism is sometimes levelled against this narrower focus in not only the school's learning goals but its whole mission. The authorities in Sweden believe that values expected of the schools mission been overlooked. There is thus reason to pay attention to both the established areas of knowledge as part of the EU's key competences.

The Swedish view of learning and the organisation of that learning as well as how it is assessed are undergoing change. In order to reinforce the development of individual competence, efforts are being made in several areas and within different sectors and several committees, relevant to this area, have been set up. This is just a brief, overall view of the situation.

A new view of learning, which entails learning through life rather than for life, has had a great impact. Furthermore, education has become the responsibility of several different sectors and the traditional dividing lines between formal and informal learning environments are not as clear as before. The municipalities organise training course at the working place and the unions and trade and industry recommend further training and learning organisations. Education has new frameworks and the freedom of choice and validity, which were previously represented by qualifying and formal education, are questions being looked in to by government committees.

The development of the individual and his responsibility for his own competence development are being emphasised more and more. Local interests are in the foreground and the function of the nation is more coordinating than unifying. One example which throws light on some aspects of this development is the so-called Adult Education Initiative which is the largest investment ever in adult education in Sweden. The Adult Education Initiative is mainly aimed at unemployed adults who, either totally or partially, lack three-year upper secondary school competence. The fundamental idea is that those adults with the greatest need for education should be able to complement their existing knowledge with new.

The above description means that the Swedish government up to the date has not developed a policy which can be expressed in ERF. The concept of Competences is rather national than those of European Union. However, the below description of the situation in Schools and Adult education can be rephrased in ERF.

##### *Sweden and KC 2 Foreign languages*

In regards to standardisation of the second language acquisition Sweden follows the Common European Framework of Reference for Languages which is a reference framework for learning, teaching, assessment (CEFR). It was designed to provide a transparent, coherent and comprehensive basis for the elaboration of language syllabuses and curriculum guidelines, the design of teaching and learning materials, and the assessment of foreign language proficiency.

The PR-ERF curriculum needs to correspond to the CERF scale, level B2 or C1 depending on the concrete requirements of a program.

The main challenge is that there is a number of different courses and study plans for the English language and mathematics available at different organisations. What would make the course based on ERF different from other

courses? What is the added value? The way out is make more focus on development of positive attitudes towards languages in order to make the foreign languages more natural part of any professional program.

The recommendation is to make distance / half-distance on-line courses for personal development based on the principle of problem-solving and development of positive attitudes. It might be a good complement to the ordinary courses within the program.

## **2. What main skills do stakeholders require from personal assistants in regards to the Key Competences?**

### **Foreign language**

- General ability to communicate in the foreign language independently and spontaneously.
- Ability to independently communicate in the foreign language within the professional field in written and oral forms.
- Ability to read and understand the basic literature and information related to the specific professional field.
- Ability to express own thoughts and give analysis in written and in oral forms within the professional field.
- Skills and knowledge of the specific terminology within the field.
- Skills and knowledge on grammar and language rules.
- Knowledge and skills on computer English.
- Knowledge and skills on business English.

### **Mathematics**

- Computation methods
- Algebra
- Percentages
- Ratios
- Percent Ratios
- Mathematical Presentation
- Geometry
- Scientific Literacy
- Technology
- Science vs Technology
- Relationships

## **3. Additional comments, if any.**

#### 4. REFERENCE LIST

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