Experts workshop on descriptors of

Digital Competence

Criteria for establishing levels

Anusca Ferrari
Project manager
JRC-IPTS
1 March 2012
Criteria for unravelling levels

From the case studies, 3 main criteria:

- **age** of target group
- cognitive **complexity**
- width or depth of the **application related content**
Age of target group

- the older the learner/user, the higher the level
- contradicts “digital natives” rhetoric
- notable exception: elderly
- autonomy of learners: support from teachers or peers is foreseen at lower levels, for higher levels independent work
Cognitive complexity

- most widespread
- capability to evaluate own work/needs
- for some frameworks: technical skills as the basis, communication and information management as higher skills
- knowledge > use > creation
Width or depth of the application-related content

- the higher the level, the higher the number of application that the user is expected to know/be able to use

- the higher the level, the higher the functions of a given application the user is expected to know/be able to use

- highest level: programming skills
European Qualification Framework

Skills:
In the context of EQF, skills are described as **cognitive** (involving the use of logical, intuitive and creative thinking) and **practical** (involving manual dexterity and the use of methods, materials, tools and instruments).
1 basic skills required to carry out simple tasks

2 basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools

3 a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information

4 a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study

5 a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems

6 advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study

7 specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields

8 the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice
1. basic skills required to carry out simple tasks

2. basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools

3. a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information

4. a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study

5. a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems

6. advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study

7. specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields

8. the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice
1 basic skills required to carry out simple tasks

2 basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools

3 a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information

4 a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study

5 a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems

6 advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study

7 specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields

8 the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice
Which criteria for establishing levels?

• Case studies analysis, 3 criteria: age, cognitive complexity, application-related content

• EQF: 2 main criteria (from ‘basic skills’ to ‘evaluation’; from ‘carry out tasks’ to ‘solve critical problems’)

• Participant definition: active use vs passive use

• Any other criteria?
Discussion

- define criteria for establishing levels
- take one area of digital competence and develop possible level descriptors
Thank you for your attention

Anusca.Ferrari@ec.europa.eu

http://is.jrc.ec.europa.eu/pages/EAP/DIGCOMP.html