

# Experts views' on Digital Competence

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# Experts' Views on Digital Competence

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**Workshop November 20<sup>th</sup> 2012 Seville**

**Centre for Learning Sciences and Technologies**

**Open Universiteit**

**celstec.org**



# Aim

- **Wider project:** establish common ground regarding digital competence
- **Specific:** complement earlier studies with experts' views

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Image: Idea go / FreeDigitalPhotos.net

# Method

Delphi study – two consultation rounds:

1. Idea generation
2. Comment on collective result



# Idea generation

*“A digitally competent person is someone who...”*

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# Results & follow up

- 79 experts (38%)
- 134 unique statements
- Workshop 17 experts: sort statements



133 unsorted items

133 unsorted items

2. Has reasonable knowledge of available technologies, their strengths and weaknesses and whether and how they might support the achievement of personal goals.

3. Has a general level of confidence, meaning that s/he is willing to experiment with new technologies, but also to reject inappropriate technologies.

4. Has sufficient social and cultural capital so that technology use is supported and encouraged in the communities to which s/he belongs.

5. Can use different ICT in a way that helps to achieve certain results quicker, better, easier.

6. Understands the role of ICT in everyday life, in social life and at work.

#### Decision making

1. Is able to make informed decisions (with human or technological assistance where

has reasonable knowledge of available technologies, their strengths and weaknesses and whether and how they might support the achievement of personal goals.

Categories

Settings

Results (16)

[share results](#)[View Your Study](#)[Download](#)

Category Summaries

[Reload](#)*Basic summary stats for each category. [Learn more.](#)*[Merge categories](#)

Category	Participants	Total items	Unique items	Agreement
Communicator and coll.	1	19	19	1
Computer programmer	1	1	1	1
Critical thinking skills	1	18	18	1
Digital creator / re-mix	1	7	7	1
e-Safety	1	10	10	1
Enthusiasm for self-dev	1	18	18	1
Etiquette and ethics	1	7	7	1
ICT skills	1	47	47	1
Social awareness	1	7	7	1



[Categories](#)[Settings](#)[Results \(16\)](#)[share results](#)[View Your Study](#)[Category Summaries](#)[Reload](#)[Download](#)

Basic summary stats for each category. [Learn more.](#)

[Merge categories](#)

Category	Participants	Total items	Unique items	Agreement
Altruism	1	1	1	1
Awareness	1	5	5	1
Basic functional skills	1	5	5	1
Behave appropriately a	1	9	9	1
Collaborate/Co-operati	1	7	7	1
Confident and tech-sav	1	25	25	1
Efficient and Effective	1	5	5	1
Everyday living	1	10	10	1
Exercise judgement	1	9	9	1
Find, engage, use, re-u	1	13	13	1
Identity/self actualisat	1	13	13	1
Learn	1	6	6	1
Power user	1	7	7	1
Safe and secure	1	13	13	1
Work and professional	1	6	6	1

# First round analysis

1. Identify unique statements (134)
2. Sort statements: 17 experts
3. Hierarchical cluster analysis



Tree Graph

Reload

Downlo

Groupings based on an Average Linkage Cluster Analysis algorithm.



Number of groups: 16

- 10. Considers legal and ethical ...
- 12. Understands the rights of o...
- 18. Understands and abides b...
- 50. Never uses digital applicati...
- 111. Has an advanced sense o...
- 129. Understands the ethics an...

- 54. Is able to assess and reduc...
- 119. Is aware of the impact an...
- 33. Is able to find out who the ...
- 72. Understands how major pl...
- 112. Knows that most major int...
- 45. Has an understanding of se...
- 64. Understands the risks asso...
- 70. Is aware of privacy issues ...
- 41. Is able to protect him/hers...
- 65. Understands the risk of ide...

- 4. Has sufficient social and cult...
- 133. Can participate fully in so...
- 27. Is willing to contribute to th...
- 73. Is able to manage his/her ...
- 51. Is able to create, share/pre...
- 52. Is able to communicate and...
- 79. Does not need high technic...

Tag
koel
co.u
kilsa
l.ne
ou@
c.eu
n
n.or
.org
dl.or
k
entei
@mi
ac-p
mail.

what are tags

# First round analysis

1. Identify unique statements (134)
2. Sort statements: 17 experts
3. Hierarchical cluster analysis
4. Feedback in small groups



Cluster C

Label:

Description

Has a critical view about information technologies. (61)

Has (often implicit) views on the benefits and drawbacks of each major digital technology used in his/her field. (89)

Has a positive but realistic attitude towards the benefits and risks associated with using technologies. (105)

Is not only aware of things that s/he does not yet know about, but is also aware that there are even more things that s/he 'doesn't know s/he doesn't know'. (120)

Sees digital media as enablers rather than inhibitors of choice and action. (42)

Uses digital media and tools without fear, always aware that digital enablers should serve the human being to have a better life (and not the opposite). (122)

Is self-motivated to seek and share information, to learn new skills, and – at least initially – experience new information with an open mind. (121)

# Feedback in small groups

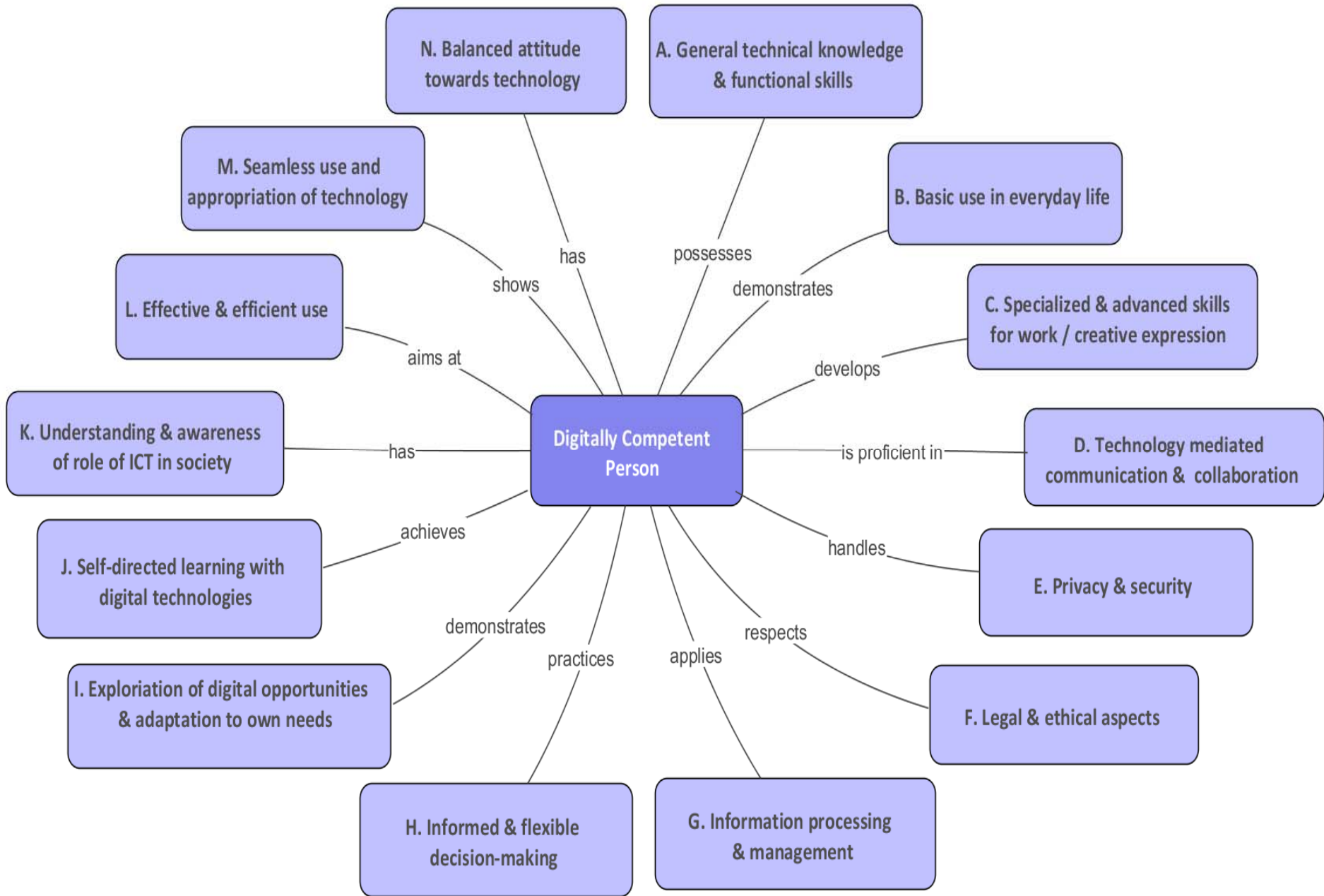
- 15 clusters
- 17 experts – 4 groups
- Rearrange / add label / describe



# Initial solution

- 14 Clusters – 125 statements
- Input for second consultation round







# Second consultation round

- Total group
- Comment / rate
- 57 experts



## Digital Competence statements

Please consider below components of digital competence and related statements and indicate for each statement whether you find the knowledge, skills, and attitudes described, are needed by: *most* people, *some* people, *few* people, or not needed at all: *none* .

### A. General technical knowledge and functional skills

*The digitally competent person knows the basics of digital devices and can use one or more of them in a functional way.*

Is comfortable using a computer, which may be one of many types (e.g. Desktop PC, Laptop, Tablet, Smartphone).

most            some            few            none

Possesses general computer skills (typing, using computers, getting into a new programme in no time).

most            some            few            none

# Final solution

- 12 Clusters
- Purposes - domains - levels
- Attitudes!



Seamless use demonstrating self-efficacy

Informed decisions on appropriate technologies

Learning about and with digital technologies

Technology mediated communication & collaboration

Specialized & advanced competence for work & creative expression

Use in everyday life

General knowledge & functional skills

Information processing & management

Balanced attitude towards technology

Understanding role ICT in society

Legal & ethical aspects

Privacy & Security

# Issues of debate

- General vs. 'pure' digital competence
- Digital competence vs. values and attitudes
- Digital competences vs. digital preference



# Additional considerations

- Context: *“it depends”*
- Competence levels:
  - Proficiency level
  - Cognitive level



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