



 mydigiskills

ALL DIGITAL Week 22-28 March 2021

1 300 000+
participants in
2010-2020



MyDigiSkills Launch event
23/03/2021 - 13h00



#MyDigiSkills

#AllDigitalWeek2021

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Welcome

Peter Palvolgyi - ALL DIGITAL CEO



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Agenda - Part 1

Welcome

- **The project**
- **The Item bank**
- **Piloting**
- **Statistical Analysis**



Questions

Agenda - Part 2

Overview of MyDigiSkills

Walkthrough of system

- Languages, Registration, Data,
- The Item Bank, Reporting

Suggested models for use

- All Digital Week and Beyond

Questions



DigCompSat



Ian Clifford, Stefano Kluzer, Dr. Māra Jākobsone

- **The Project** - Ian
- **The Item Bank** – Stefano
- **The Piloting** – Ian
- **The Statistical Analysis** – Māra

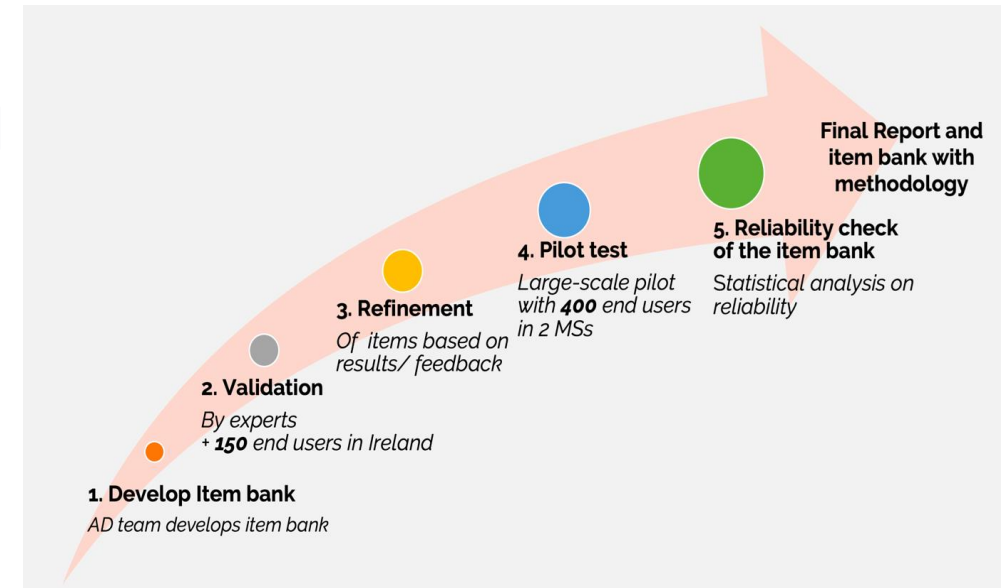
DigCompSAT Overview



JRC contracted ALL DIGITAL in 2019 to develop, pilot and analyse results for a Self Assessment Tool (SAT) across six levels of DigComp 2.1.

The project included an initial development phase of the ‘item bank’ with a panel of experts, followed by a ‘small’ pilot with around 150 people in Ireland to test the concept.

The item bank was then reviewed, reduced and translated into Spanish and Latvian before being tested with around 200 more people in each country.



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The Item Bank

ENHANCING
DIGITAL SKILLS
ACROSS EUROPE

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The Item bank – self-assessment statements' design criteria

- * cover all 21 DigComp competences and **48 main topics** (initial list of about 130-140 items)
- * **short and simple** as possible
- * related to **practical actions** in common situations, valid in different national contexts
- * with **examples** whenever possible
- * **neutral** with respect to commercial brands and specific technological solutions
- * address all three DigComp competence elements: **knowledge, skills** and **attitudes**
- * refer to DigComp **three proficiency levels**: 25% foundation, 50% intermediate and 25% advanced level
- * **answering options** on a **4-level scale** and different for K-S-A types

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The Item bank – definition process

- * **142** items submitted to 15 experts for revision and validation
- * **105** items approved by JRC for Pilot 1. Included 5 ‘fake’ items
- * **84** items were approved for Pilot 2 based on:
 - Pilot 1 qualitative feedback (2 focus groups + interviews)
 - Pilot 1 statistical analysis (144 respondents)
 - test-duration target (20+ minutes)
 - 50 unchanged, 15 minor and 17 significant revisions (e.g. rephrasing, adding examples) + 2 answering options modified.
- * Pilot 2 statistical analysis (460 respondents) + user experience survey confirmed the validity of the 84 items. Adjustments only to 7 items.

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The Item bank – features of SA statements types

Knowledge K = “I know that...”, “I know about ...”, “I understand ...”

Skills S = “I can ...”, “I know how to ...”, “I am able to...”

Attitude A = “I am careful ...”, “I am willing to ...”, “I am keen/open to ...”

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The Item bank – answering options on 4 level scale

KNOWLEDGE

- 0. I have no knowledge / never heard of this
- 1. I have only a limited understanding of this
- 2. I have a good understanding of this
- 3. I fully understand this topic/issue and I could explain it to others

SKILLS

- 0. I don't know how to do it
- 1. I can do it with help
- 2. I can do it on my own
- 3. I can do it with confidence and, if needed, I can support/guide others

ATTITUDE

- 0. Not at all
- 1. Not much / very little
- 2. Yes / Yes I am /Yes I do
- 3. Very much!

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The Item bank – final features



All 21 DigComp competences are covered by the 82 items:

- * 3 competences have 3 items
- * 17 competences have 4 items
- * 1 competence has 5 items

Skills and Knowledge items are evenly distributed across competence Areas.

All 5 Areas and 14 competences have at least 1 Attitude item.

In terms of proficiency levels: 18 Foundation, 49 Intermediate and 15 advanced items.



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The Item bank – concluding reflections

Attitude items and related answers sometimes sound weird ... is that digital competence?

82 questions are many: interesting experience, but can be boring

SA questions have inherent limitations -> a **reflection tool** rather than for competence measurement (but good correlation with preliminary digital skills profiling based on Eurostat questions)

Proficiency level **results are significant only at Area level**, but not for specific competence. ... Mara will explain why this is the case...

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The Pilots

Ian Clifford



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DigCompSat Pilots



The pilots... pandemic affected...

Demographically balanced to the population

Initial 'sampling survey' to identify perceived level and demographics

- ICS Skills – Ireland – 150 People – 3 weeks on site in Jan 2020
- Ibermatica – Spain – 200 people – 4 weeks *online* in ~~May~~ July 2020
- Baltic Computer Association – Latvia – 260 people – online & on-site

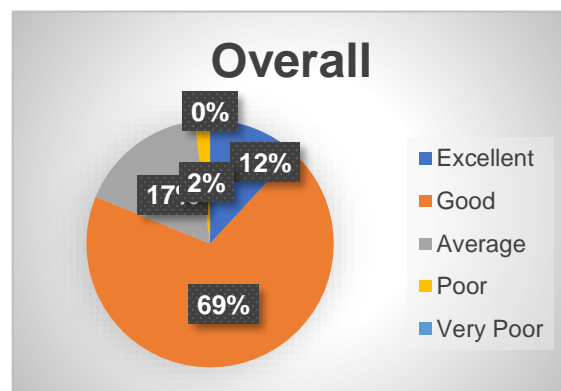
...100 respondents from the second pilot to a satisfaction survey...



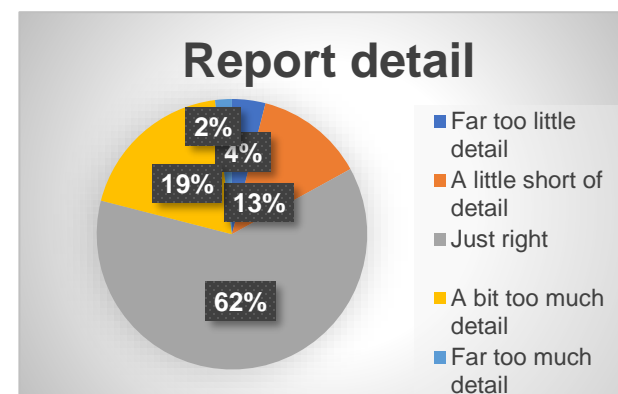
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User response: DigCompSAT



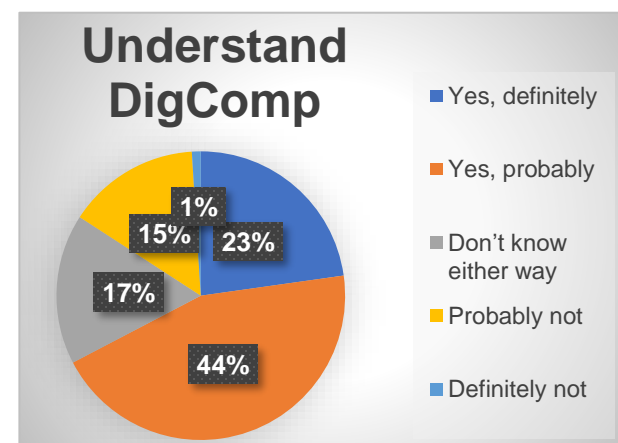
Overall, the results were predominantly good. 81% felt that the SAT was good or excellent with only 17% feeling that it was average, and only 2% thinking it was poor.



The SAT report was largely welcomed with 62% feeling that it was “just right”, and then relatively similar proportions feeling there was too much or too little detail.



A good majority of 62% felt they would definitely or probably recommend it to a friend, a quarter being undecided and about 14% feeling that they wouldn't recommend it.



Finally, with quite a strong indicator, 67% of respondents felt that it helped them to understand DigComp better

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Statistical analysis and test validation



Purpose of the statistical analysis



- **Test the validity and reliability of the test –**
 - Does the test measures what it is supposed to do- Digital competences?
 - Are the questions consequent and comprehensive?
- **Check the test applicability for different demographic groups :**
 - Age
 - Gender
 - Education level
 - National background
 - Digital skills level
- **Evaluate the possible Statistical errors and social impact factors**

Data source for the statistical analysis



- **First pilot** – 178 respondents in Ireland (EN version) – 144 valid
- **Second pilot** –
 - 260 respondents in Latvia (LV version)
 - 200 respondents in Spain (ES version)
- **Data for statistical analysis :**
 - **Respondents socio demographic parameters** (age. gender, education level, digital skills level, country)
 - **Respondents test results** : answer to each question ; time spent on the test

How was the analysis performed ?



- Recoding all data on Moodle platform and analysis with SPSS tool
- **Traditional Statistical and Psychometric analysis applied :**
 - Cronbach's alpha
 - Means, Standard Deviation
 - Difficulty
 - Discrimination
 - Dimensionality

How was the analysis performed -2



- Cronbach's alpha model as basis for test reliability

Cronbach's alpha measures reliability or internal consistency. Reliability is how well a test measures what it should.

- Difficulty index:

Item difficulty is a measure of individual test question difficulty. It is the proportion of test takers who answered correctly out of the total number of test takers

- Discrimination index

Discrimination index is the ability of a test to discriminate between different levels of learning

- Dimensionality

Dimensionality describes how the separate items of the measurement tool link to each other and if there are groups of items forming within the assessment tool

Statistical analysis main results



- **Test reliability and validity**
 - Statistical analysis helped to improve the item base from Pilot 1 to Pilot 2 removing «weak» questions
 - For the final item bank all major statistical indicators showed good results
- **Test relevance for different socio demographic groups**
 - SAT is equally relevant for different age and gender groups
 - SAT results might be slightly influenced by national mentality of respondents in different countries
 - **SAT results show strong correlation with respondent general education level and preliminary «defined» digital skills level- as it should be**

Final report

The finished, tested system had a very high degree of statistical reliability and the final report was published by JRC in December 2020.

<https://ec.europa.eu/jrc/en/publication/digcompsat>





Questions



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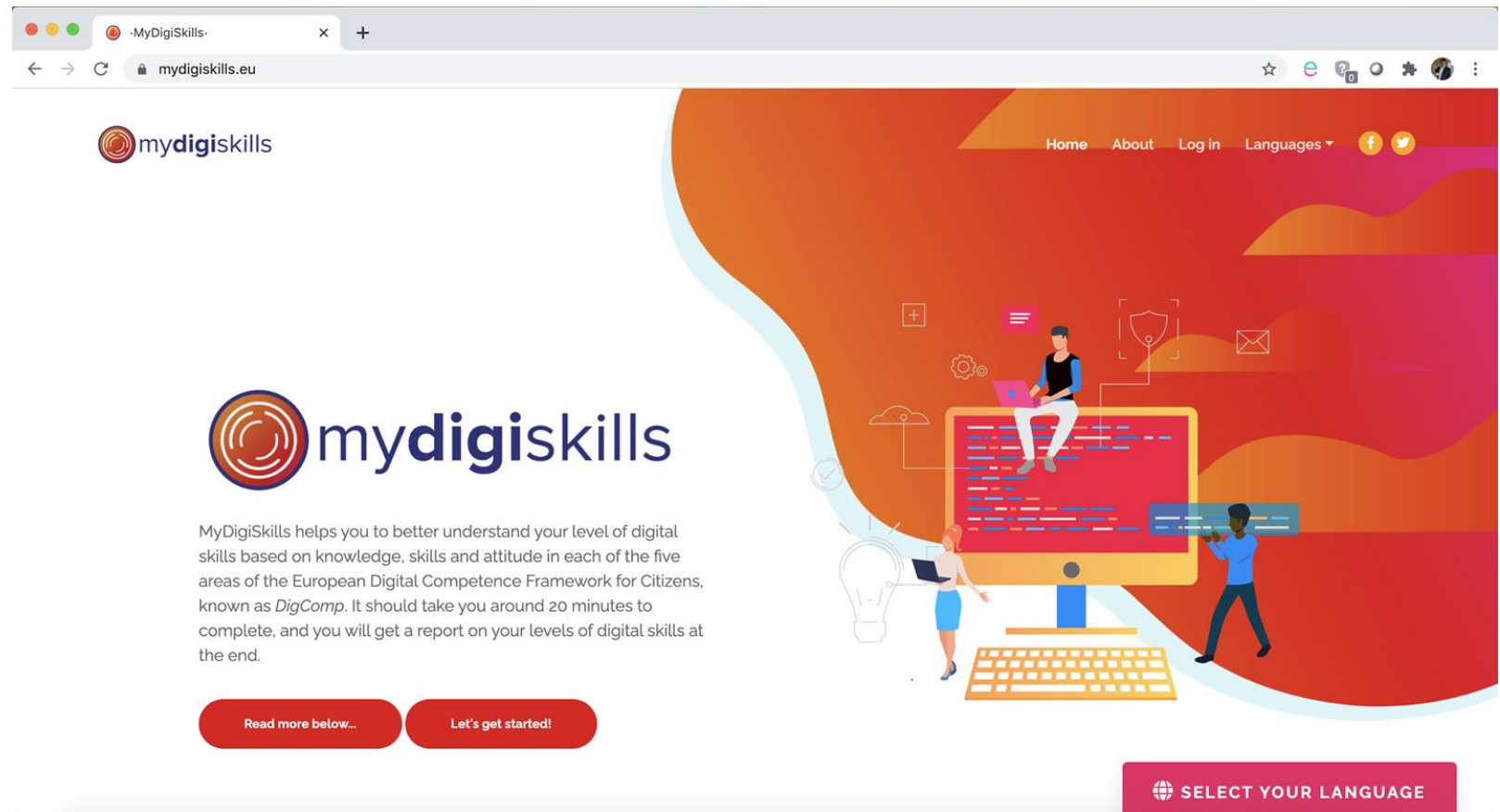




Part 2 – mydigiskills



- Partners
- Languages
- Registration
- Data
- The Item Bank
- Reporting



Partners



Technical partner



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Antonio Román Casas – Aupex



Languages



English



Spanish



Latvian



Romanian



Italian



German



Lithuanian

Registration

Simple data request:
name and email, plus
demographic information

Registration

Continue

+ New

Continue

Please tell us a little more about you

Name *	Age *
<input type="text" value="Name"/>	<input type="text" value="Age"/>
Email *	Confirm Email *
<input type="text" value="Valid Email"/>	<input type="text" value="Confirm Email"/>
Password *	Confirm password *
<input type="text" value="Password"/>	<input type="text" value="Confirm password"/>
Gender *	Country *
<input type="text" value="Your Gender"/>	<input type="text" value="Select your country"/>
Employment Status *	Education level *
<input type="text" value="Employment Status"/>	<input type="text" value="Education level"/>

☐ I accept the privacy policy.
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Let's start!

Let's start!

Before we start...

The questions that follow refer to your own understanding of your knowledge, skills and attitude to the use of digital technologies. It is important that you read the statements carefully and answer honestly.

For each question there will be 4 answer options. Please choose the best option that reflects your level of knowledge, understanding and attitude to each statement.

MyDigiSkills is estimated to take around 20 minutes. It includes 82 statements grouped into the 5 areas of the European Framework of Digital Competences for Citizens (DigComp 2.1).

At the end you will get a personal report that shows you where you are weaker or stronger in the 5 digital competence areas. You can use this report to identify where you might need to strengthen your digital skills.

You are starting the first section. The questions here are related to the competence area Information and Data Literacy.



Information and Data Literacy

Let's start!

General progress

1 - Information and Data Literacy



I know that different search engines may give different search results, because they are influenced by commercial factors.

I have no knowledge of this / I never heard of this

I have only a limited understanding of this

I have a good understanding of this

I fully understand this topic/issue and I could explain it to others

Submit

Demonstration time



....Never work work with children, animalsand websites....

<https://mydigiskills.eu/>



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The Skills report

On the left, Competence Area, on the right Individual Competences.

People can be different levels within an area.

It is colour-coded and can also be requested as PDF by email.

JOSÉ MANUEL, BASED ON THE ANSWERS THAT YOU GAVE, YOUR DIGITAL COMPETENCE LEVELS ARE SHOWN BELOW. ON THE LEFT, ARE YOUR LEVELS FOR THE 5 AREAS OF DIGITAL COMPETENCE, ON THE RIGHT ARE YOUR LEVELS FOR THE 21 INDIVIDUAL DIGITAL COMPETENCES. YOU MAY HAVE DIFFERENT INDIVIDUAL LEVELS WITHIN ONE COMPETENCE AREA. THE COLOUR CODING FOR LEVELS IS SHOWN BELOW.

Information and Data Literacy

Foundation

- Foundation 1.1 Browsing, searching, filtering data, information and digital content
- Low 1.2 Evaluating data, information and digital content
- Foundation 1.3 Managing data, information and digital content

Communication and Collaboration

Foundation

- Foundation 2.1 Interacting through digital technologies
- Foundation 2.2 Sharing through digital technologies
- Foundation 2.3 Engaging in citizenship through digital technologies
- Foundation 2.4 Collaborating through digital technologies
- Foundation 2.5 Netiquette
- Foundation 2.6 Managing digital identity

Digital Content Creation

Advanced

- Advanced 3.1 Developing digital content
- Advanced 3.2 Integrating and re-elaborating digital content
- Advanced 3.3 Copyright and licences
- Advanced 3.4 Programming

Safety

Advanced

- Advanced 4.1 Protecting devices
- Advanced 4.2 Protecting personal data and privacy
- Advanced 4.3 Protecting health and well-being
- Advanced 4.4 Protecting the environment

Problem solving

Intermediate

- Intermediate 5.1 Solving technical problems
- Intermediate 5.2 Identifying needs and technological responses
- Foundation 5.3 Creatively using digital technologies
- Intermediate 5.4 Identifying digital competence gaps

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Gema Parrado León – Aupex



Suggested models for use



All Digital Week and Beyond

- Initial self-assessment/ self-reflection – around 20 minutes
- Romania, Latvia and Italy being used already.

Questions