Improving the measurement of ICT skills

Summary of results from the experts sub-group

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Objectives

At the 7th EGH in 2019, it was decided to:

1. Develop recommendations for modules to provide measures of the following topics:
   a) Ability to evaluate the reliability of content that is found online
   b) Awareness of the use of devices and/or the Internet as they related to personal well-being (e.g. cyberbullying, addiction and social exclusion
   c) Ability to recognize skill gaps and an individual's need for upskilling in the digital domain
2. Develop proposals for the aggregation of ICT skill categories

a) Ability to evaluate the reliability of content found online

- Module is based on the critical literacy questions from the most recent Model Survey of ICT Use in the European Union
- Chose to focus on the behavior of the individual and the question on whether a respondent saw disinformation is not included in the proposed indicators
- Only three questions although a larger suite of questions are provided in the Appendix of the document

Indicator	Question
Behavior: checking accuracy of online info	E4. Have you checked the truthfulness of the information you found on internet news sites or social media in the last 3 months? Yes No
Behavior: action taken to check accuracy of online info	(if E4 = yes) E5. How did you check accuracy of the information found on the internet? a) Checking the sources or finding other information on the internet (e.g. other news sites, Wikipedia, etc.) b) Following or taking part in discussion on the internet regarding the information c) Discussing the information offline with other persons or using sources not on the internet
Reason for not checking	E6. Why did you not check the accuracy of the information you found on the internet? a) You already knew that information, content or source was not reliable b) Lack of skills or knowledge (e.g. Did not know how to check information on the internet or it was too complicated to do) c) Did not think about checking d) Did not care about checking. e) Trusted the source without having to check. f) Other reasons

b) The use of the Internet and devices and their relation to personal well-being

- Two approaches considered:

  1) self-reported incidents; and
  2) subjective well-being approach

- Hybrid approach suggested approach is in line with a recent in-depth review of the topic that was conducted for the Conference of European Statisticians on Digitalization and well-being

- Proposed module of six questions

Indicator	Question
Evaluative well-being	Q1. Taking all things together, how happy would you say you are? Extremely unhappy 0 1 2 3 4 5 6 7 8 9 10 Extremely happy
Self-rated health	Q2. The next questions are about your health. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being. How is your health in general? Would you say it is… Very good Good Fair Bad Very bad Don't know
Self-rated mental health	(if respondent uses a smartphone) Q3. In a typical day, which of the following scenarios apply to you? Select all that apply. a) You check your smartphone at least every 30 minutes b) Before going to sleep, the last thing you do is check your smartphone c) After waking up, the first thing you do is check your smartphone d) You use your smartphone while watching television e) You use your smartphone while eating dinner with others
Taking a break from Internet	Q4. During the past 12 months, did you do any of the following for the benefit of your well-being? a) Used software or adjusted device settings to limit the amount of time spent on devices (e.g. smartphones) b) Took extended breaks from or decreased time spent on social media

<table>
<tr><th>Indicator</th><th>Question</th></tr>
<tr><td>Self-perceived impact of digital technologies</td><td>Q5. In general, would you say your use of digital technologies and the Internet have had a mainly positive or negative impact on the following?
<table>
<tr><th></th><th>Positive</th><th>Negative</th><th>Neutral</th></tr>
<tr><td>a) Connectedness with friends or family</td><td></td><td></td><td></td></tr>
<tr><td>a) Sense of belonging to your community</td><td></td><td></td><td></td></tr>
<tr><td>a) Your mental health</td><td></td><td></td><td></td></tr>
<tr><td>a) Your physical health</td><td></td><td></td><td></td></tr>
<tr><td>a) How you spend your time</td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Self-perceived victimization</td><td>Q6. During the past 12 months, have you felt that you were a victim of any of the following incidents on the Internet?
Select all that apply.
Did you experience:
a) Bullying
b) Harassment
c) Discrimination
d) Stalking
e) Misuse of personal pictures, videos or other content
f) Fraudulent use of your identity
g) Other
OR
No</td></tr>
</table>

c) Individual Upskilling in the Digital Domain

- Focused on a self-reported module in addition to two questions on the type and the topic of the training undertaken
- These questions are based on the Community Survey on ICT Usage in Households and by Individuals which will encourage comparability
- Module of three questions allows the capture of information on:
  - the perceived need for upskilling by an individual in particular domains
  - an indicator of the use of formal vs. informal learning
  - a third indicator on the topic(s) of study chosen by individuals

<table>
<tr><th>Indicator</th><th>Question</th></tr>
<tr><td>Self-perceived skills mismatch (digital skills)</td><td>Q1. Which of the statement below best describes your skills relating to the use of the following digital tools and applications in your daily life?
<table>
<tr><th></th><th>I don’t have enough skills and I need training to be able to use…</th><th>I have the skills but I need training to make more effective use of…</th><th>I have enough skills to use effectively and don’t need training on…</th><th>I don’t need to use…</th></tr>
<tr><td>a) Desktop or laptop computers</td><td></td><td></td><td></td><td></td></tr>
<tr><td>b) Tablets (e.g. iPads, etc.)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>c) Smartphones</td><td></td><td></td><td></td><td></td></tr>
<tr><td>d) IoT devices</td><td></td><td></td><td></td><td></td></tr>
<tr><td>e) Cloud storage tools</td><td></td><td></td><td></td><td></td></tr>
<tr><td>f)….</td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Training taken to improve digital skills</td><td>Q2. Have you carried out any of the following learning activities to improve your skills to use digital tools and applications in the last 12 months? Select all that apply.
a) Training paid by yourself or third parties (e.g. employer, public organizations)
b) Free online course
c) Self-study (e.g. books, YouTube videos, tutorials, etc.)
d) Learning from others (e.g. colleagues, family, friends, etc.)

If yes to any item in Q2, go to Q3.</td></tr>
</table>

Indicator	Question
Type of digital tool/skill acquired in past 12 months	Q3. Which of the following topics on the use of digital tools or applications did you learn about in the last 12 months? a) Configuring and installing devices b) Using a software (e.g. Microsoft Office) c) Online marketing or e-commerce d) Social media e) IoT applications (e.g. smart TV, connected watch) f) Cloud services (e.g. Google drive, Amazon Web Services, etc.) g) IT-security or privacy management h) Programming languages, including design or management of websites i) Other, please specify

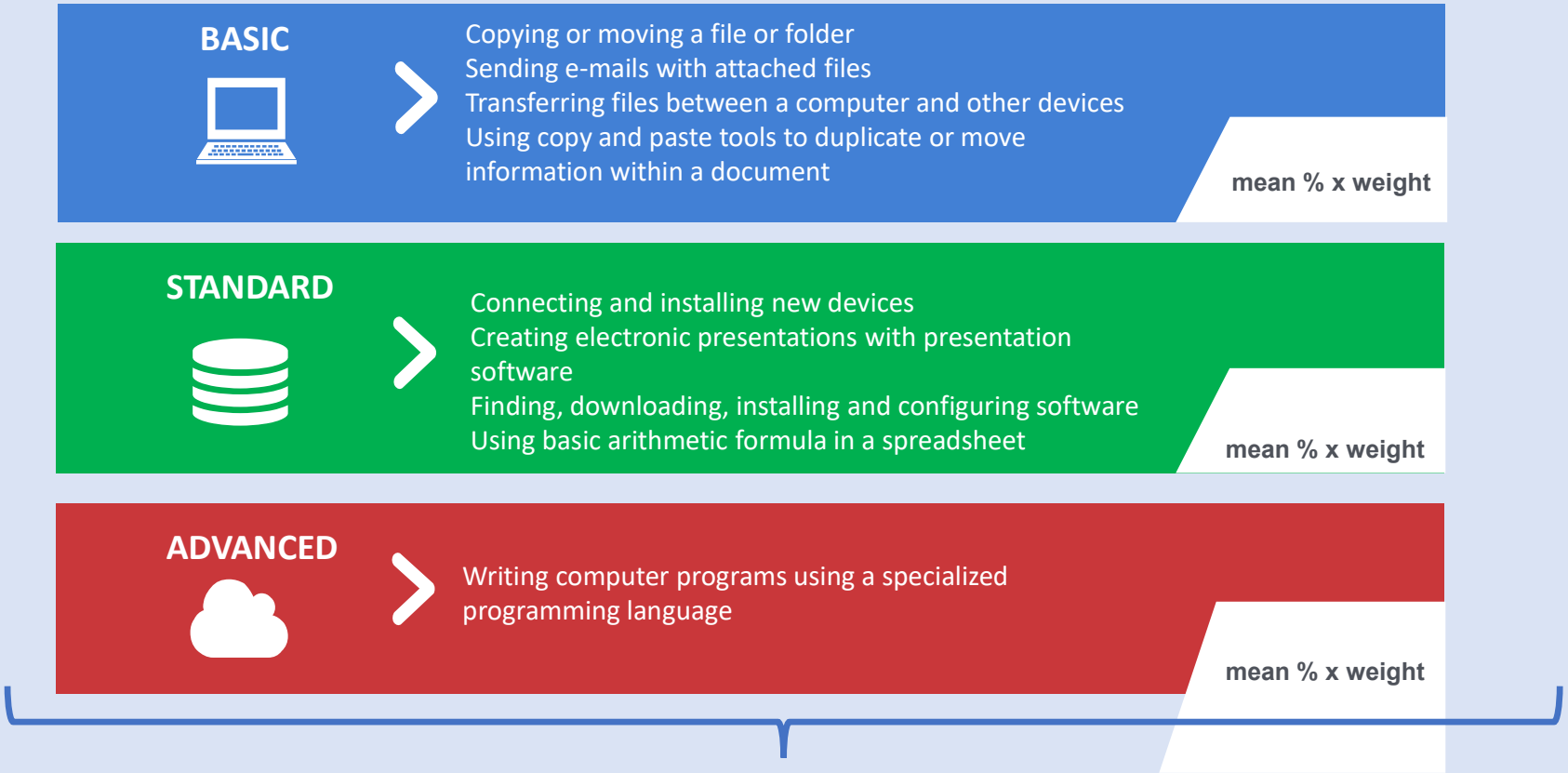
Aggregation of ICT skill categories: Digital Skills Dashboard

Purpose and considerations

- Purpose: create a summary skills score that combines the multiple types of ICT skills captured in the ITU model survey
- Considerations:
  - only aggregate data is available from the member countries
  - a single uniform weighting approach may not be appropriate given varying policy priorities across member countries

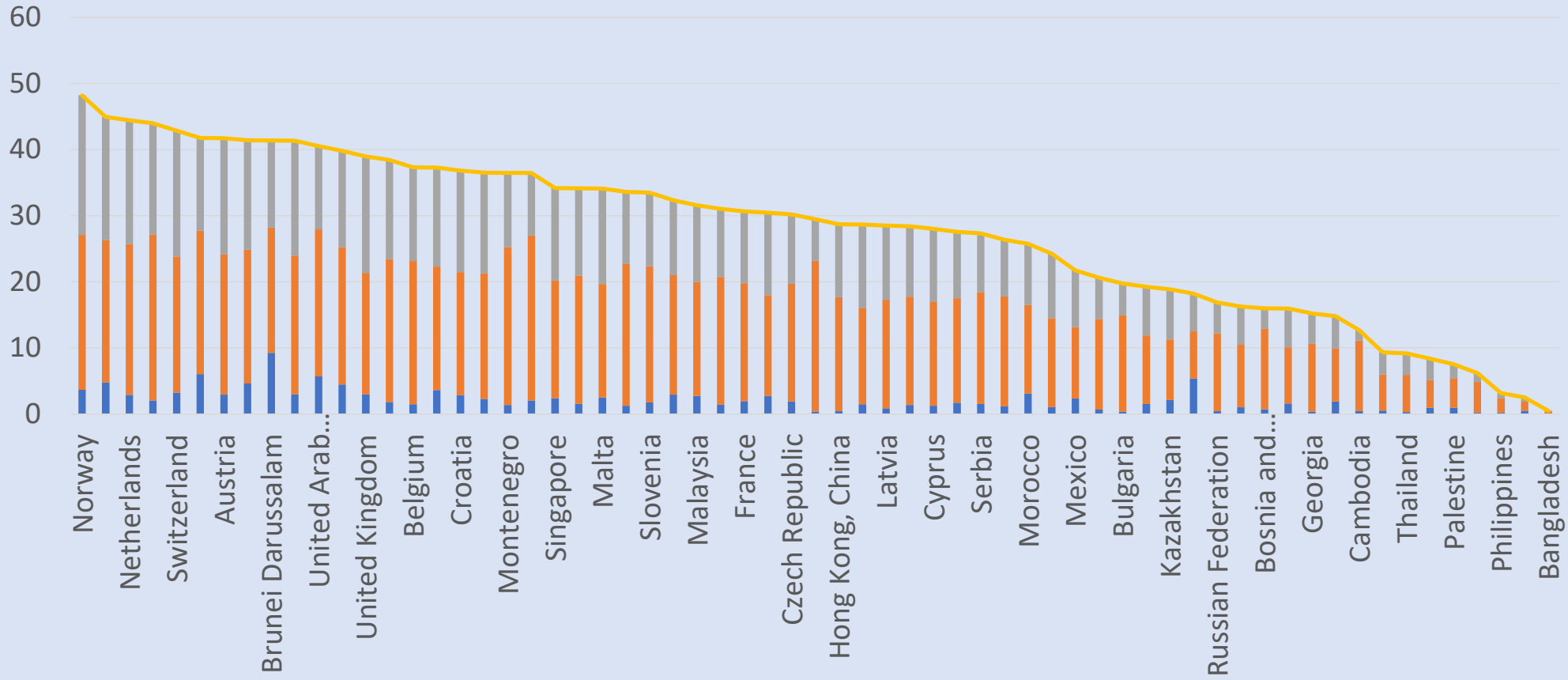
Proposed approach builds on previous work by EGH and EGTI, to categorize ICT skills into **basic, standard,** and **advanced**

Categorization and aggregation of digital skills from ITU model survey



Digital skills dashboard

	Basic	Standard	Advanced
Weight	33%	33%	33%



Discussion and next steps