Manual for measuring ICT access and use by households and individuals, 2020 Edition

2025 ICT skills revision (HH9/HH15)

Introduction

Following the publication of the 2020 edition of the Manual for measuring ICT access and use by households and individuals, the ITU's Expert Group on ICT Household Indicators (EGH) recommended a reorganization and revision to Indicator HH15 (Individuals with ICT skills, by type of skills). These changes better align the measurement of ICT skills with the evolving nature of digital technologies and the changes that they bring along to society and the economy.

The new list of recommended ICT indicators is comprised of 20 activities that people carry out using digital technologies – the list remains device-agnostic. It builds upon activities developed as part of HH15: Individuals with ICT skills and is complemented by relevant activities from the activities within HH9: the use of internet by type of activity. The set of activities are now categorized into five skill areas derived from the Digital Competence Framework for Citizens (DigComp 2.0). EGH also recommended a new methodology for calculating skill levels by skill area and at an overall level. Each of these recommendations were made based on work performed by the subgroup on measuring ICT skills. This subgroup operated from 2022 to 2024 and its recommendations are summarized in its 2024 report to EGH.

This document is divided into two sections. The first section on Detailed information on core ICT household indicators includes all updated methodology and related revisions in Table 6 of the 2020 Manual for HH9 and HH15. The table should be used as a basis for development of future household surveys which include questions on online activities and ICT skills. The information in the table below supersedes data in Table 6 of the 2020 Manual.

The second section of this document includes related revisions to other paragraphs and tables in the 2020 Manual.

Detailed information on core ICT household indicators

Table 6. Detailed information on core indicators on access to, and use of, ICT by households and individuals: HH1 to HH23

Indicator HH9: Proportion of individuals using the Internet, by type of activity
Definitions: This is the proportion of individuals who undertook one or more activities using the Internet for private (defined as non-work) purposes from any location in the last three months. Internet activities are classified in groups of similar activities, and are defined as follows: Access to information • Finding information about goods or services *

Indicator HH9: Proportion of individuals using the Internet, by type of activity

- Finding health information *
- Getting information from general government organizations
- Using services related to travel or travel-related accommodation
- Accessing news or books in a digital format (e.g. reading online news, watching news videos online, reading e-books on an e-reading device) *

Communication, civic participation and collaboration

- Sending or receiving e-mail
- Making calls (telephoning over the Internet/VoIP using Skype, WhatsApp, Viber, iTalk, etc.; includes video calls via webcam) *
- Participating on social networking platforms (e.g. creating user profile, reading or posting messages or other contributions to Facebook, X, Instagram, Snapchat, TikTok etc.) *
- Making an appointment with a health practitioner via the Internet (i.e. website, app, software)
- Interacting with general government organizations (downloading/requesting forms, completing/lodging forms online, making online payments and purchasing from government organizations etc.)
  General government organizations should be consistent with the SNA93 (2008 revision) concept of general government. According to the SNA "… the principal functions of government are to assume responsibility for the provision of goods and services to the community or to individual households and to finance their provision out of taxation or other incomes; to redistribute income and wealth by means of transfers; and to engage in non-market production." (General) government organizations include central, state and local government units.
- Taking part in consultations via the Internet to define civic or social issues (urban planning, signing a petition, voting, etc.) *
- Accessing or posting opinions via any device on chat sites, blogs, newsgroups or online discussions (e.g. on civic or political issues, general interest topics) that may be created by any individual or organization

Electronic commerce, trade, and transactions

- Purchasing or ordering goods or services (via the Internet whether or not payment was made online; includes purchasing of products such as music, travel and accommodation via the Internet) *
- Selling goods or services (via eBay, Mercado libre, Facebook, Amazon, Alibaba, etc.)
- Using Internet or mobile banking (includes electronic transactions with a bank for payment, transfers, etc. such as M-Pesa, or for looking up account information) *

Learning

- Doing an online course or accessing online learning material (e.g. video tutorials, webinars, learning apps) *

Professional life

- Looking for a job or sending/submitting a job application (includes searching specific websites for a job; sending/submitting an application online)
- Participating in professional networks (professional networks are also seen in the broader context of social networking and have the same requirement of profile creation, contributing through messaging or chat, or uploading text or audio-visual content files; examples of professional or business networks are LinkedIn, Xing, Bark, Opportunity and Jobcase)

Entertainment, digital content consumption

- Listening to web radio (either paid or free of charge)
- Watching web television (either paid or free of charge)

Indicator HH9: Proportion of individuals using the Internet, by type of activity

- Streaming or downloading images, movies, videos or music; playing or downloading games (either paid or free of charge)

Digital content creation

- Uploading self/user-created content to a website to be shared (text, images, photos, videos, music, software, etc.)
- Using storage space on the Internet to save documents, pictures, music, video or other files (e.g. Google Drive, Dropbox, Windows Skydrive, iCloud, Amazon Cloud Drive)
- Editing text documents, spreadsheets or presentations using digital tools (e.g. Google Docs, Sharepoint, (Apple iCloud, etc.)*

Clarifications and methodological issues:

* The categories marked with * overlap with categories asked in HH15 (Individuals with ICT skills, by type of skills) and can therefore be removed from HH9 if HH15 forms part of the survey. Countries should consider their need for a filter question on Internet use for some of these categories where individuals can accomplish near-equivalent tasks using widely adopted non-Internet ICT services such as mobile banking or integrated voice response (IVR). The choice to include this filter question should depend on the country context and availability of such services.

Note that these activities are restricted to private purposes and therefore exclude activities such as purchasing over the Internet undertaken as part of a person's job or teleworking.

Individuals should be asked about all Internet activities. The survey question used by countries should specify multiple responses and should not, for example, ask about the most frequent activities undertaken. Activities are not mutually exclusive, that is, there is overlap between some categories.

When collecting data on these activities, some of them may need rewording and examples provided according to the local context.

The suggested reference period is the last three months. Country practices vary, but ideally, reference periods should be aligned in order to obtain comparable data

Individual is discussed in Chapter 7.

Countries may wish to extend activities to some non-private purposes, such as teleworking (working from one's home either as an employee or as a self-employed person).

Model question:

For which of the following activities did you use the Internet for private purposes (from any location) in the last three months?'

Respondents should select all activities (see above) that apply.

Countries may ask about activities as a series of yes/no questions, each referring to one activity.

Disaggregation and classifications:

If data allow breakdown and disaggregation, the following can be considered:

- Breakdown by region, such as geographical areas, urban/rural.
- Classification by sex.
- Classification by age: countries can use the following age groups for reporting on individuals' age: under 5; 5–9; 10–14; 15–24; 25–34; 35–44; 45–54; 55–64; 65–74 and 75 and over.
- Classification by highest education level attained: countries can use the ISCED 2011 classification for reporting on individuals' level of education: primary education or lower

Indicator HH9: Proportion of individuals using the Internet, by type of activity
(ISCED 0, 1); lower secondary education (ISCED 2); upper secondary or post-secondary non-tertiary education (ISCED 3, 4); tertiary education (ISCED 5, 6); and post-tertiary education (ISCED 7, 8). • Classification by labour force status: countries can use the following categories for reporting on individuals' labour force status: employee; self-employed (includes employers, own account workers, members of producers' cooperatives and contributing family workers); workers not classifiable by status, unemployed; and outside the labour force. • Classification by occupation: countries should use the ISCO 2008 categories where these are in use (if not, use ISCO-88 per Table 5 earlier in this chapter) for reporting on individuals' occupation: managers; professionals; technicians and associate professionals; clerical support workers; service and sales workers; skilled agricultural, forestry and fishery workers; craft and related trades • workers; plant and machine operators, and assemblers; elementary occupations; and armed forces occupations (noting that armed forces personnel may be out of scope). • Other breakdowns or classifications, where relevant variables or questions are used in the questionnaire, such as individual income.
Calculation: The number of in-scope individuals using the Internet for a specific activity is calculated by aggregating the weighted responses for each activity (see Chapter 8). Proportions are expressed as percentages and are calculated by dividing the number of in-scope individuals using the Internet for a specific activity by either the total number of in-scope individuals using the Internet (see HH7) or by the total number of in-scope individuals, and then multiplying the result by 100. Examples: The percentage of Internet users who undertook Internet banking is calculated as: • HH9%Internet users banking = [(number of in-scope individuals who used the Internet for banking) / (total number of in-scope individuals who used the Internet)]*100 The percentage of in-scope individuals using the Internet for Internet banking is calculated as: • HH9%Individuals banking = [(number of in-scope individuals who used the Internet for banking) / (total number of in-scope individuals)]*100
Policy relevance: The indicator on the types of Internet activities undertaken by individuals is a key indicator in tracking the information society because it allows policy-makers, businesses and analysts to understand how Internet access is changing the way that people do business, learn, buy, communicate and interact with others, including governments. This indicator is important for the formulation of policies since it is an indication of the demand for certain online services and applications. For example, it helps government organizations understand the demand for e-government information and services. Questions on e-goods and services will help businesses and others understand the degree to which users are adopting e-commerce, etc. HH9 also provides useful information on the sophistication of Internet use and the degree of ICT skills that Internet users have, in conjunction with HH15. Classificatory variables can provide further information on differences in the Internet activities undertaken by men/women, children/adults, employed/unemployed, etc. This information may be used, for instance, to design policies to promote e-commerce and extend e-government services to particular target groups, in order to ensure transition towards an inclusive information society.

Table 6. Detailed information on core indicators on access to, and use of, ICT by households and individuals: HH1 to HH23 (continued)

Indicator HH15: Individuals with ICT skills, by type of skills

Definitions:

This refers to ICT skills, defined for the purpose of this indicator as having undertaken certain activities in the last three months, independent of the device(s) used.

Activities to measure ICT skills are as follows:

Information and data literacy

- Finding information about goods or services *
- Finding health information *
- Accessing news or books in a digital format (e.g. reading online news, watching news videos online, reading e-books on an e-reading device) *
- Verifying the truthfulness of information found online

Communication and collaboration

- Sending content (e.g. document, picture, video through attached files, embedded content, hyperlinks) in messages (e.g. e-mail, messaging service, MMS)
- Making calls (telephoning over the Internet/VoIP using Skype, WhatsApp, Viber, iTalk, etc.; includes video calls via webcam) *
- Participating on social networking platforms (e.g. creating user profile, reading or posting messages or other contributions to Facebook, X, Instagram, Snapchat, TikTok etc.) *
- Taking part in consultations via the Internet to define civic or social issues (urban planning, signing a petition, voting, etc.) *

Digital content creation

- Duplicating or moving data, information and content in digital environments (e.g. within a document, between devices, on the cloud)
- Using spreadsheet software (e.g. using basic arithmetic formulae, functions, macros)
- Creating content combing different digital media (including text, images, sound, video or charts)
- Editing text documents, spreadsheets or presentations using digital tools (e.g. Google Docs, Sharepoint, Apple iCloud, etc.) *
- Programming or coding in digital environments

Safety

- Taking security measures to protect devices and online accounts (e.g. changing passwords, avoiding unsecure links or downloads, setting up two-factor authentication)
- Taking measures to protect privacy on your device, account or app (e.g. to limit the sharing of personal data and information, restrict access to social network profiles or geolocation, prevent targeted marketing)

Problem-solving

- Using Internet or mobile banking (includes electronic transactions with a bank for payment, transfers, etc. such as M-Pesa, or for looking up account information) *
- Purchasing or ordering goods or services (via the Internet whether or not payment was made online; includes purchasing of products such as music, travel and accommodation via the Internet) *
- Doing an online course or accessing online learning material (e.g. video tutorials, webinars, learning apps) *
- Connecting new devices (e.g. camera, printer, wireless speakers or wireless headphones)
- Installing software or apps

Indicator HH15: Individuals with ICT skills, by type of skills
Skill levels in a skill area for individuals are calculated based on number of activities an individual has reported. An individual's skill level in each skill area should be calculated as below: • Basic skill level = 1 activity • Above basic skill level = 2 or more activities Overall ICT skill levels for individuals should be calculated according to the following categories: • Basic skills in 0-1 of 5 skill areas • Basic skills in 2 of 5 skill areas • Basic skills in 3 of 5 skill areas • Basic skills in 4 of 5 skill areas • Basic skills in 5 of 5 skill areas • Above basic skills in 5 of 5 skill areas
Clarifications and methodological issues: *Individual* is discussed in Chapter 7. * The categories marked with * overlap with categories asked in HH9 (Individuals using the Internet, by type of activity). National or local examples of software or services should be included where possible to maximize the understanding of the activity. When collecting data on these activities, questions may need rewording and examples provided according to the local context to maximize respondent understanding. Most individuals will have carried out more than one activity and therefore multiple responses are expected. Skill levels for individuals are calculated based on their responses to questions, no additional questions are required. Skill levels for individuals in a skill area can be calculated if data are collected on **at least two activities in a skill area**. Overall skill levels can be calculated only where skill levels have been calculated for **all five skill areas**. Depending on the availability of equivalent non-Internet services, countries may use a filter question on Internet use where an activity is judged to be relevant only for Internet.
Model question: Which of the following activities have you carried out in the last three months (independent of the device used)? Respondents should select all that apply (see above). Some countries may ask about tasks as a series of yes/no questions. This question is asked of all individuals.
Disaggregation and classifications: If data allow breakdown and disaggregation, the following can be considered: • Breakdown by region, such as geographical areas, urban/rural. • Classification by sex. • Classification by age: countries can use the following age groups for reporting on individuals' age: under 5; 5–9; 10–14; 15–24; 25–34; 35–44; 45–54; 55–64; 65–74 and 75 and over. • Classification by highest education level attained: countries can use the ISCED 2011 classification for reporting on individuals' level of education: primary education or lower

Indicator HH15: Individuals with ICT skills, by type of skills
(ISCED 0, 1); lower secondary education (ISCED 2); upper secondary or post-secondary non-tertiary education (ISCED 3, 4); tertiary education (ISCED 5, 6); and post-tertiary education (ISCED 7, 8). • Classification by labour force status: countries can use the following categories for reporting on individuals' labour force status: employee; self-employed (includes employers, own account workers, members of producers' cooperatives and contributing family workers); workers not classifiable by status, unemployed; and outside the labour force. • Classification by occupation: countries should use the ISCO 2008 categories where these are in use (if not, use ISCO-88 per Table 5 earlier in this chapter) for reporting on individuals' occupation: managers; professionals; technicians and associate professionals; clerical support workers; service and sales workers; skilled agricultural, forestry and fishery workers; craft and related trades workers; plant and machine operators, and assemblers; elementary occupations; and armed forces occupations (noting that armed forces personnel may be out of scope). • Other breakdowns or classifications, where relevant variables or questions are used in the questionnaire, such as individual income.
Calculation: Indicator HH15 is calculated as the proportion of in-scope who have carried out each activity. The indicator is expressed as a percentage. For instance, the percentage of individuals having duplicated or moved data, information and content in digital environments can be calculated as: $HH15_{\text{duplicated or moved information}}$= [(number of in-scope individuals who duplicated or moved information) / (number of in-scope individuals)]*100 For analytical purposes, some may also be interested in calculating as the proportion of Internet users since most ICT skills activities imply use of the Internet. However, analysts should be aware of a mismatch between the numerator and denominator as there may be some non-Internet users that have ICT skills.
Policy relevance: ICT skills determine the effective use that is made of ICTs. The information from HH15 may therefore assist in making the link between ICT usage and impact. Currently, there is little data available for measuring ICT-specific skills, and hence researchers and policy-makers must rely on proxy indicators to measure this important enabler of ICT development. The conceptual framework adopted for this skills question is the European Commission's Digital Competence Framework for Citizens (DigComp 2.0). The framework has five major areas of skills measurement: ▪ Information and data literacy ▪ Communication and collaboration ▪ Digital content creation ▪ Safety ▪ Problem solving The guiding principles of this framework helped to complete the structure and effectiveness of questions HH9 and HH15. HH15 is an appropriate way to measure and track the level of proficiency of individuals. This information could be used, for example, to adapt ICT literacy courses in schools, identify barriers to certain uses of ICTs as well as potential applications and services that could be accessed over the Internet. Classificatory variables can provide further information on the differences in ICT skills among men/women, children/adults, employed/unemployed, etc. These data may be used to inform targeted policies to improve ICT skills, and thus contribute to an inclusive information society.

Other revisions

Other revisions - Chapters 4, 6, and 8

The following revisions to paragraphs and tables within Chapters 4, 6, and 8 of the current Manual are aligned with the revisions published in table 6 above. Similarly, these revised versions supersede the corresponding text and tables in the current Manual.

Chapter 4. Statistical standards and measurement topics for ICT household statistics

Core ICT household indicators

158a. In 2024, after the recommendations of the EGH, several revisions to Individuals with ICT skills, by type of skills (HH15) were incorporated. These revisions reorganize the activities comprising the indicator into five skill areas: Information and data literacy; Communication and collaboration; Digital content creation; Safety; and Problem Solving. The wording of many of the ICT skills activities were also amended and several additional skill-related activities were added from Proportion of individuals using the Internet, by type of activity (HH9). In addition, new aggregate measures of individuals' ICT skill levels were also added with guidelines on how these can be calculated in an internationally comparable way.

Individual ICT use core indicators

172. Five individual use indicators (HH5, HH7, HH10, HH18) are presented as the proportion of in-scope individuals using ICT equipment or the Internet, while HH19 is expressed in terms of those who do not use the Internet. The other four use indicators (HH8, HH9, HH12 and HH17) break down Internet use (by location, Internet activities undertaken and frequency of use respectively). HH15 (ICT skills) which also includes skills-related HH9 indicators should be calculated as the proportion of all individuals (in order to be device-agnostic). Indicators on e-commerce (HH20 to HH22) break down online purchases by individuals (and can be presented as percentages of all individuals purchasing online goods or services), while HH23 is calculated as a proportion of all in-scope individuals.

Classifications for ICT household statistics

Individual characteristics

ICT skills

201. The calculation of aggregate ICT skills indicators (e.g. basic, above basic skills) has also been recommended. In 2024, EGH-Skills recommended methodology for calculating skill levels of individuals by skill area and also at an overall level. This methodology is similar to the EU's Digital Skills Indicator[1] and combines competence domains and skills levels. The calculations are described in detail in Table 6 below.

[1] See: https://publications.jrc.ec.europa.eu/repository/handle/JRC130341.

Chapter 4. Statistical standards and measurement topics for ICT household statistics

Other measurement topics related to ICT household statistics

Cybersecurity: trust in the online environment and child online protection

225. Indicator HH15 on ICT skills of individuals includes response categories relevant for the measurement of cybersecurity- and trust-related behaviour, namely:

- Taking security measures to protect devices and online accounts (e.g. changing passwords, unsecure links or downloads, setting up two-factor authentication)
- Taking measure to protect privacy on your device, account or app (e.g. to limit the sharing of personal data and information, restrict access to social network profiles or geolocation, prevent targeted marketing)
- Verifying the truthfulness of information found online

227. A particularly relevant issue regarding security is child online protection, which comprises topics such as awareness and attitudes, risk-prone behaviour of children, incidents and children's responses and preventive actions. A statistical framework for measuring child online protection has been developed by ITU (ITU, 2010b). Some of the core indicators can be considered as part of this framework by considering the relevant age breakdowns (children under 15). These include:

- percentage of individuals under 15 who used the Internet during the past three months (HH7);
- risk-prone activities, indicated by the following categories of HH9 (Internet activities undertaken by individuals):
    - *Participating on social networking platforms (e.g. creating user profile, reading or posting messages or other contributions to Facebook, X, Instagram, Snapchat, TikTok, etc.)*
    - *Accessing or posting opinions via any device on chat sites, blogs, newsgroups or online discussions (e.g. on civic or political issues, general interest topics) that may be created by any individual or organization*;
    - *Purchasing or ordering goods or services;*
    - *Watching web television (either paid or free of charge);*
    - *Streaming or downloading images, movies, videos or music; playing or downloading games;*
    - *Uploading self/user-created content to a website to be shared (text, images, photos, videos, music, software, etc.);*
    - *Making calls (telephoning over the Internet/VoIP using Skype, WhatsApp, Viber, iTalk, etc.; includes video calls via webcam);*

Chapter 6. Question and questionnaire design for ICT household surveys

ICT model questions

ICT concepts that may be difficult to understand

322. There are a number of concepts used in the core list of ICT indicators that may be difficult for respondents to understand and respond to consistently. They include:

- definition of computer,
- definition of portable devices,
- Internet access services,
- multichannel television services,
- Internet activities related to government organizations,
- mobile cellular telephones, and
- activities (to measure ICT skills).

Non-aware Internet users

329. Country experiences show that some Internet users may not be aware that they used the Internet, and answer negatively to the question on Internet use, while answering positively to certain activities requiring the Internet, such as posting comments or contents in social media. This is particularly the case when some Internet services are offered free of charge ("zero-rate services"). Box 32 presents the results of research highlighting this fact. This suggests that after answering positively to some categories of response of the question related to activities carried out (to measure indicator HH15), the interviewer should probe the answer to the question on use of the Internet. In particular, positive responses to the following categories would require the double-checking of answers on the use of Internet:

- Sending content (e.g. document, picture, video through attached files, embedded content, hyperlinks) in messages (e.g. e-mail, messaging service, MMS)
- Installing software or apps

Activities (to measure ICT skills)

342. The household core indicator HH15 deals with activities that reflect an individual's level of ICT skills, independently of the device used. This is a difference with the previous versions of the Manual, where only activities carried out with a computer were considered. It is considered probable that if an individual does not understand the meaning of a particular task (e.g. using spreadsheet software) then they are unlikely to have undertaken that task. Some countries may mention commonly used software to help respondents identify the kind of activities carried out (see Box 35 on the case of Canada).

Chapter 8. Data processing for ICT household statistics

Data editing

Table 12. Micro and macroedits for ICT household statistics

Indicator		Possible microedits and probes (edits applied to individual records, preferably at time of interview)	Possible macroedits (edits applied to aggregated data)
HH9	Proportion of individuals using the Internet, by type of activity	If HH7 is 'yes' at least one of the response categories must be selected.	The values of these categories, as a percentage of individuals using the Internet, should add to significantly more than 100 (per cent), as most individuals undertake more than one activity. Note that categories are not mutually exclusive (that is, there
	Finding information about goods or services		This is often the second highest output category, after *Sending or receiving e-mail*.
	Finding health information	Interviewers may need to use examples.	
	Getting information from government organizations	Interviewers may need to use examples to show which organizations conform to the definition of general government organizations.	There may be data from government organizations indicating the extent of usage of their websites.
	Using services related to travel or travel-related accommodation	Interviewers may need to provide examples of major websites in their country.	
	Accessing news or books in a digital format	Interviewers may need to provide examples.	
	Sending or receiving e-mail	Interviewers may need to explain what e-mail is.	This is likely to be the largest output category.
	Making calls (telephoning over the Internet/VoIP using Skype, WhatsApp, Viber, iTalk, etc.; includes video calls via webcam)	Interviewers may need to explain the technicalities involved in this category and provide examples, such as Skype.	It is likely that values will continue to increase over time for countries at earlier stages of Internet use. For other countries, flat trends are expected.
	Participating on social networking platforms	Interviewers may need to explain the technicalities involved in this category and provide examples, such as Facebook, Twitter.	

Indicator		Possible microedits and probes (edits applied to individual records, preferably at time of interview)	Possible macroedits (edits applied to aggregated data)
HH9 cont.	Making an appointment with a health practitioner via a website		
	Interacting with general government organizations	Interviewers may need to use examples to show which organizations conform to the definition of general government organizations	There may be data from government organizations indicating the extent of interactive usage of their websites.
	Taking part in consultations via the Internet to define civic or social issues (urban planning, signing a petition voting, etc.)		
	Accessing or posting opinions via any device on chat sites, blogs, newsgroups or online discussions (e.g. on civic or political issues, general interest topics) that may be created by any individual or organization	Interviewers may need to explain the technicalities involved in this category.	
	Purchasing or ordering goods or services (purchase orders placed via the Internet whether or not payment was made online; includes purchasing of products such as music, travel and accommodation via the Internet)	Interviewers may need to provide definitions so that payments are excluded. Interviewers may need to provide examples of major selling websites such eBay, Mercado libre, Facebook, Amazon, Alibaba, etc.	The size of this category may be related to several factors, including the online security environment and the availability of Internet commerce sites. The proportion of Internet users having purchased or ordered goods /services should match with that obtained for HH20, HH21 or HH22.
	Selling goods or services	Interviewers may need to provide examples of major selling websites such eBay, Mercado libre, Facebook, Amazon, Alibaba, etc.	
	Using Internet or mobile banking	Interviewers may need to explain the activities per the definition and give examples available (such as M-pesa)	The size of this category should be related to the availability of Internet and/or mobile banking.
	Doing an online course or accessing online learning material (e.g. video	Interviewers may need to provide examples of major websites such as Wikipedia (there may be national examples as well).	

Indicator		Possible microedits and probes (edits applied to individual records, preferably at time of interview)	Possible macroedits (edits applied to aggregated data)
	tutorials, webinars, learning apps)		
HH9 cont.	Looking for a job or sending/submitting a job application	Interviewers may need to provide examples.	
	Participating in professional networks	Interviewers may need to provide examples of major websites in their country (e.g. LinkedIn, Xing, Bark, Opportunity and Jobcase)	
	Listening to web radio (either paid or free of charge)	Interviewers may need to provide examples of major websites in their country.	
	Watching web television (either paid or free of charge)	Interviewers may need to provide examples of major websites in their country.	
	Streaming or downloading images, movies, videos or music; playing or downloading games (either paid or free of charge)	Interviewers may need to provide examples of major websites in their country.	
	Uploading self/user-created content to a website to be shared	Interviewers may need to provide examples of major social networking websites such as Facebook (there may be national examples as well).	
	Using storage space on the Internet to save documents, pictures, music, video or other files	Interviewers may need to provide examples of major applications (e.g. Google Drive, Dropbox, Windows Skydrive, iCloud, Amazon Cloud Drive)	This is a new category (introduced in 2013).
	Editing text documents, spreadsheets or presentations using digital tools	Interviewers may need to provide examples of such digital tools (Google Docs, Sharepoint, Apple iCloud, etc)	
HH15	Individuals with ICT skills, by type of skills	The activities may need to be explained per the definitions in the indicator (Table 6). However, it is considered probable that if an individual does not understand the meaning of a particular task, then they are unlikely to have undertaken that task	The values of these categories, expressed as a percentage of individuals having used the Internet, should add to much more than 100 (per cent), allowing for most individuals having done more than one activity

Indicator		Possible microedits and probes (edits applied to individual records, preferably at time of interview)	Possible macroedits (edits applied to aggregated data)
HH15 cont.	Skill levels by skill area		Skill levels cannot be calculated if fewer than two activities in a skill area are collected. Sum of individuals with basic and above basic skills in a skill area must be greater than or equal to the activity in that skill area which the maximum number of individuals report having done.
	Overall skill levels		Overall skill levels cannot be calculated if skill levels have not been calculated for all five skill areas. Sum of individuals with overall basic and above basic skills must be less than or equal to the sum of individuals with basic and above basic skills in any one skill area.
	Duplicating or moving data, information and content in digital environments (e.g. within a document, between devices, on the cloud)		
	Sending content (e.g. document, picture, video through attached files, embedded content, hyperlinks) in messages (e.g. e-mail, messaging service, MMS)	Description of content - using locally relevant examples - is needed	
	Using spreadsheet software		
	Connecting new devices		
	Installing software or apps		
	Creating content combining different digital media	Description of content - using locally relevant examples - is needed	
	Taking security measures to protect devices and online	Description of security measures - using locally relevant examples - is needed	

Indicator		Possible microedits and probes (edits applied to individual records, preferably at time of interview)	Possible macroedits (edits applied to aggregated data)
HH15 cont.	accounts		
	Taking measures to protect privacy on your device, account or app (e.g. to limit the sharing of personal data and information, restrict access to social network profiles or geolocation, prevent targeted marketing)	Description of privacy measures - using locally relevant examples - is needed	
	Verifying the truthfulness of information found online		
	Programming or coding		
	Other activities	See HH9 activities above	

Revised annexes

In addition to revisions of main text and tables, Annexes also require revisions in line with the revisions described in Table 6. These Annexes will be revised in detail in the next version of the Manual or with addenda prior to the release of the fully updated Manual.

- Annex 2, the Model questionnaire for measuring ICT access and use by households and individuals is currently scheduled to be updated later in 2025.
- Annex 4, the ITU Questionnaire on Information and Communication Technology (ICT) Access and Use by Households and Individuals has already been updated on the ITU website. In addition, a code description file is also now available for country contacts who would like to map their own codes to ITU codes for simpler flat file submissions.