Digital Literacy and Measurement Criteria

ICT Agency of Sri Lanka
Department of Census and Statistics

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Operationalizing the measurement of Digital Literacy as part of a large-sample national survey

Executive Summary

The ICTA together with the Department of Census and Statistics has identified the need to refine the Digital Literacy definition to be in par with the global definitions, as it is crucial to create a digitally literate country and to cater to the relevant data needs. The consultative committee consists of 13 experts representing the community, industry, statisticians, academia, and relevant stakeholders has refined the definition of Digital Literacy and assessment criteria. The digital literacy questions would be administered in the context of the annually conducted Labour Force Survey.

Problem Statement

Sri Lanka's Department of Census and Statistics had for many years been measuring IT and computer literacy in collaboration with the ICT Agency. Rapid changes in the market and in technology had led to the conclusion that the old questions were no longer yielding actionable insights. The Department of Census and Statistics and ICTA has identified the need to refine the Digital Literacy definition in par with the global definitions is crucial to creating a digitally literate country. A committee appointed by ICTA was tasked with coming up with new questions that would "refine the Digital Literacy definition in par with the global definitions is crucial to create a digitally literate country." It was understood that the constraints of a long questionnaire that was administered to multiple members of a household required a parsimonious approach to question design.

Approach

Considering the value and impact of the national digital transformation, ICTA works collaboratively with the Department of Census and Statistics to refine the digital literacy definition and identify assessment criteria. To ensure the proper definition of digital literacy, and measurement criteria, it was essential to obtain expert consultation and stakeholder contribution in this process. For this purpose, ICTA has appointed a consultative committee representing the community, industry, statisticians, academia, and relevant stakeholders.

The committee consists of 13 members, jointly chaired by Professor Rohan Samarajiva and Associate Chief Digital Economy Officer of the ICT Agency of Sri Lanka. The committee was decided to critically evaluate the current questions and to anchor the new questions on a well-thought-out and broadly consulted multilateral effort.

Regarding the current questions, it was agreed that the current formulation included an undesirable priming effect, in that asking about ownership of devices at the outset was likely to cause the respondents to think that their IT or computer behaviors had to be on devices that they owned and thereby bias the response. The need to ask about ownership of devices was questioned, when there were other means, such as the HIES, of obtaining ownership data.

Upon assessment of several initiatives to measure digital literacy, it was agreed that the UNESCO (the UN agency responsible for literacy, digital and otherwise) Institute for Statistics 2022 Report on *Measurement Strategy for SDG Global Indicator 4.4.2 using International Largescale Assessments,*[1] which was based on prior work that systematically addressed the challenges of defining digital literacy and measuring it.[2] The working definition of digital literacy adopted from the UNESCO work stream was:

> *"Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy."*

> "ඩිජිටල් සාක්ෂරතාව යනු රැකියා සඳහා තොරතුරු වෙත ආරක්ෂිතව සහ සුදුසු පරිදි ප්‍රවේශ වීම, කළමනාකරණය කිරීම, අවබෝධ කර ගැනීම, ඒකාබද්ධ කිරීම, සන්නිවේදනය කිරීම, ඇගයීම සහ නිර්මාණය කිරීම, යහපත් රැකියා සහ ව්‍යවසායකත්වය සඳහා ඩිජිටල් තාක්ෂණය හරහා තොරතුරු නිර්මාණය කිරීමේ හැකියාවයි. පරිගණක සාක්ෂරතාව, තොරතුරු හා සන්නිවේදන සාක්ෂරතාව, තොරතුරු සාක්ෂරතාව සහ මාධ්‍ය සාක්ෂරතාව ලෙස විවිධ ලෙස හඳුන්වනු ලබන නිපුණතා එයට ඇතුළත් වේ."

The digital literacy questions would be administered in the context of the annually conducted Labour Force Survey. This module would be in the latter part of the questionnaire and was therefore susceptible to respondent fatigue. Therefore, it was agreed that the questions would have to be limited to a maximum of two or three; that they would have to be understandable to both the field staff and the respondents in Sinhala and Tamil; and compatible with the CAPI [Computer Assisted Personal Interview] method used by

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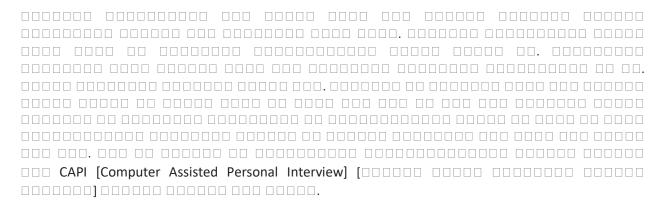[1] Measurement Strategy for SDG Global Indicator 4.4.2 using International Largescale Assessments

[2] Law, N., Woo, D., de la Torre, J., & Wong, G. (2018). A global framework of reference on digital literacy skills for indicator 4.4. 2 (UIS/2018/ICT/IP/51). UNESCO Institute for Statistics. http://uis.unesco.org/sites/default/files/documents/ip51-globalframework-reference-digital-literacy-skills-2018-en.pdf

the Department of Census and Statistics. It was also agreed that the questions should be designed to generate actionable insights.

After reviewing the 26 elements identified as providing a comprehensive measure of digital literacy, it was decided to focus on the elements 1.1, 1.2, 1.3, 2.1, 2,2, 2.5, and 2.6 for Question 1, with sub-questions addressing safety-related and ethical behaviors. For Question 2, it was decided to draw on elements such as 5.2 and 5.3 to capture how digital capabilities were used in activities that contributed to the economy, society, or culture.

The questions were drafted in Sinhala, to be translated into Tamil and English. It was decided that they would be pilot-tested and that the ordering, etc. would be improved based on the outcome of the testing.

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The Questions

Q1.Have you used an internet-connected device (e.g., computer, tablet, smartphone) within the past six months to do any of the following [please answer more than one question, as relevant]

	Yes/No	If yes, did you consider your safety or that of others? Yes/No	If yes to the main question, did you adhere to ethical norms? Yes/No
1.1 To search for data or information			
1.2 To evaluate data or information			
1.3 To store data or information in a retrievable manner			
1.4 To share or receive data or information			

Q 1.1 is a screen. If Q 1.1 is answered in the negative, no further questions will be asked from the Q1 cluster. Those who answer yes only to Q 1.1 will be counted as having a primary level of digital literacy. Those who answer yes to one or more of Questions 1.2, 1.3, and 1.4 will be counted as having an advanced level of digital literacy. The percentages of persons answering the safety and ethics sub-questions will be separately reported and will have no bearing on the calculation of the percentage of the population (15-65) who have basic/advanced digital literacy.

Q2. Have you used digital technology to satisfy any of the requirements below [please answer all relevant questions]

	Yes/No	If yes, did you consider your safety or that of others? Yes/No	If yes to the main question, did you adhere to ethical norms? Yes/No
2.1 To buy or sell goods or services			
2.2 To provide or receive educational services			
2.2A To support educational activities			
2.3 To perform a job remotely			
2.3A To support job-related tasks			
2.4 To disseminate digital content			
2.5 To make or receive payments (including banking)			
2.6 To manage a business			
2.7 To assure the safety of family or property			
2.8 To coordinate meetings or events			
2.9 Other (please describe)			

Here, all questions, except 2.2A and 2.3A (they will be asked only if the main question is answered in the negative), will be asked. There is no screening question. The safety and ethics sub-questions will be asked only if the main question is answered affirmatively. The ordering of the questions will be changed

depending on the results of the pilot. Questions may be added depending on the answers to 2.9 in the pilot. The intention of the Q2 cluster is to understand what digital literacy is being used for. The results for each question, especially if reported in terms of demographic categories, may contribute to policy or market responses.

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2.8. ▢▢▢▢▢▢ ▢▢▢▢▢▢▢▢▢▢▢▢ (▢▢▢: ▢▢▢▢▢▢▢▢, ▢▢▢▢▢▢)				
2.9. ▢▢▢▢▢ (▢▢▢▢▢ ▢▢▢▢▢)				

Consultative Committee for Refine the Definition of Digital Literacy and Develop Measurement Criteria

	Name	Organization
1	Prof. Rohan Samarajeewa	LIRNEasia
2	Prof. Indika Perera	University of Moratuwa
3	Dr. Ajantha Athukorala	University of Colombo
4	Dr. Ajith Madurapperuma	Open University of Sri Lanka
5	Dr. Kanishka Karunasena	SLCERT
6	Mr. Waruna Sri Dhanapala	Ministry of Public Administration, Home Affairs, Provincial Councils and Local Government
7	Mr. M. P. N. M. Wickramasinghe	Ministry of Technology
8	Mr. Harsha Wijayawardhana	Theekshana R and D
9	Mrs. H M. D Sepalika	Department of Census and Statistics
10	Mr. T. D. M. S. D. Perera	Department of Census and Statistics
11	Mr. L. S. N. Perera	Department of Census and Statistics
12	Mr. Damith Hettihewa	CSSL
13	Ms. Deshani Senanayake	UNDP

a) **Joint Chair**: Prof. Rohan Samarajeewa and Mr. Sameera Jayawardena (Associate Chief Digital Economy Officer), ICT Agency of Sri Lanka

b) **Project Manager**: Mr. Kasun Wickramsuriya, Senior Manager (Capacity Building), ICT Agency of Sri Lanka

Document Acceptance

Here by we confirm that the above refined definition of Digital Literacy and measurement criteria has been developed as per our consultation.

	Name	Organization	Role of the committee	Signature
1	Prof. Rohan Samarajeewa	LIRNEasia	Chairman	
2	Prof. Indika Perera	University of Moratuwa	Member	
3	Dr. Ajantha Athukorala	University of Colombo	Member	
4	Dr. Ajith Madurapperuma	Open University of Sri Lanka	Member	
5	Dr. Kanishka Karunasena	SLCERT	Member	
6	Mr. Waruna Sri Dhanapala	Ministry of Public Administration, Home Affairs, Provincial Councils and Local Government	Member	
7	Mr. M. P. N. M. Wickramasinghe	Ministry of Technology	Member	
8	Mr. Harsha Wijayawardhana	Theekshana R and D	Member	
9	Mrs. H M. D Sepalika	Department of Census and Statistics	Member	
10	Mr. T. D. M. S. D. Perera	Department of Census and Statistics	Member	
11	Mr. L. S. N. Perera	Department of Census and Statistics	Member	
12	Mr. Damith Hettihewa	CSSL	Member	
13	Ms. Deshani Senanayake	UNDP	Member	

Sameera Jayawardena   :
Associate Chief Digital Economy Officer, ICTA

Kasun Wickramasuriya   :
Senior Manager - Capacity Building, ICTA