

# The *future* of BRICS



**BRICS**  
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between providers of intellectual capital and physical labour is a case in point.

Digital skills have become particularly significant during the pandemic. Previous efforts to ensure broader access to digital technology allowed many economic agents to adjust faster to the new circumstances.

Monitoring the effect of measures aimed to reduce digital inequalities and impart skills, is an essential part of government policy. BRICS countries often position themselves as an expert centre for emerging economies. They could jointly develop a common digital literacy framework that reflects the needs and policy goals of developing countries.

## **BRIDGING DIGITAL DIVIDE: THE ROLE OF DIGITAL LITERACY**

Since the 2014 summit in Fortaleza, Brazil, digitalisation has been on the BRICS agenda, with that declaration saying that “ICTs [information and communication technologies]

**D**igital literacy has been declared a priority for cooperation in the new ‘Strategy for BRICS Economic Partnership 2025’. It states that the grouping will “develop digital literacy programmes for harmonious and inclusive adaptation of the BRICS population,” which is extremely important with the expansion of digital infrastructure and development of opportunities to harness the potential of digital technologies.

Promoting digital literacy is a global sustainable development priority. The percentage of individuals who possess a minimum level of digital literacy is an indicator of Sustainable Development Goal 4.4 (by 2030, substantially increasing the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship). In the context of the Fourth Industrial Revolution and acceleration of digitalisation, digital technologies serve as a premise for participation in the global value chain. A gap in these skills may add to the inequalities between countries and regions within countries. The divide

## **DEVELOPING A BRICS-LED DIGITAL**

# Literacy

## **FRAMEWORK**

**ALEXANDRA MOROZKINA  
AND EVGENY TONKIKH**

should provide instruments to foster sustainable economic progress and social inclusion”.<sup>2</sup> The theme has since appeared in every declaration, highlighting the need to harness opportunities for sustainable development brought by ICT and bridge the digital divide.

The digital divide can be defined as “the gap between individuals, households, businesses and geographic areas regarding their opportunities to access information and communication technologies, and their use of the Internet for a wide variety of activities”.<sup>3</sup> Improving digital literacy is an important part of policies aimed at closing the digital gap in BRICS countries. With the development of ICT infrastructure, the so-called second-level digital divide comes to the fore with respect to the “capabilities for harnessing digital data and frontier technologies”.<sup>4</sup> For instance, the lack of internet/computer knowledge is a key obstacle to internet usage in China,<sup>5</sup> and among the three main barriers to internet usage in South Africa<sup>6</sup> and Brazil.<sup>7</sup> The Russian and Indian governments have recognised the importance of universal digital literacy and made it a part of national ICT strategies.<sup>8</sup>

The concept of digital literacy is widely discussed in academic circles and international organisations. Most researchers try to combine it with the various kinds of literacy needed for info-communication technologies and emphasise those essential in an internet-dominated world.<sup>9</sup> The concept of digital literacy has evolved from ‘computer literacy’, ‘information literacy’, ‘media literacy’ and ‘ICT literacy’. Definitions now range from

“the ability to access networked computer resources and use them”<sup>10</sup> to “the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship”.<sup>11</sup> A clear trend can be seen towards broadening the concept to include areas not directly related to ICT and digital technologies, such as information evaluation and critical reasoning (or information literacy). While these are important skills in the information age, their inclusion into digital literacy is highly controversial.

However, researchers agree that digital literacy can help eliminate inequality and that investment in this field is necessary.<sup>12,13,14,15</sup> After all, “the lack of digital literacy is a major obstacle to connecting the 3.6 billion people still cut off from the digital era”.<sup>16</sup> Given the absence of a universally accepted definition and assessment methodology, there is a need to further develop the financial literacy agenda amongst international organisations.<sup>17</sup> An assessment of the current state of digital literacy and identifying key challenges is critical to develop relevant agenda and policy measures. Therefore, a critical task is establishing a universally accepted assessment model for digital literacy that allows for international comparisons.<sup>18</sup>

**Table 1**  
**Digital Literacy Levels in BRICS**

	BRAZIL	CHINA	INDIA	RUSSIA	SOUTH AFRICA
Digital literacy			20.1%	70%	
Share of people who do not use the internet due to the lack of knowledge (% of non-netizens)	24.3%	51.5%			12.9%

Source: National Statistics Office, India; National Agency for Financial Information, Russia; China Internet Network Information Center; Brazilian Institute of Geography and Statistics; General Household Survey, South Africa<sup>23</sup>

## DIGITAL LITERACY IN BRICS

Evidence of digital literacy assessments can be found only in India and Russia (see Table 1). In the other three BRICS countries, authorities conduct sample surveys on ICT issues, including reasons for not using the internet. These surveys throw up some interesting results, including a significant share of people who do not have enough knowledge of respective technologies. This can serve as an indicator of the second-level digital divide. Although by no means comprehensive, these results can give an idea of the importance of digital literacy and help monitor the situation.

In addition to concerns on digital literacy levels in the BRICS, each country has special aspects that must be considered. Brazil, for instance, still has high rates of digital inequality despite considerable improvements in infrastructure and access to technology in the last 15 years,<sup>24</sup> raising the question of a second- and third-

level digital divide. According to the 2018 National Survey of Brazilian households (Continuous PNAD TIC 2018), 24.3 percent of those who did not use the internet said the reason was a lack of knowledge. Among students, this share is lower, at 15.9 percent. Importantly, there are striking regional differences in this number. Markers such as age, and disparity between access via cell phones and other devices are also influencing factors.<sup>25</sup> Another Brazilian survey shows that 45 percent of households that do not use the internet stated inability as the reason.<sup>26</sup>

China believes that digital access for all citizens is the key to narrowing the income gap between urban and rural areas. However, the main factor affecting the digital divide is age, as the share of non-netizens aged 60 and above accounted for 46 percent of all non-netizens in China in 2020.<sup>27</sup> As per a sample survey, the main reason for no internet usage is the lack of

knowledge (51.5 percent). Nevertheless, digital literacy in China appears substantially high if the level of technology usage is considered. For example, the number of electronic payments is constantly increasing, and in 2018, around 83 percent of all payments were made via mobile.<sup>28</sup> According to the Chinese Academy of Press and Publication, almost 70 percent of Chinese people use digital platforms to read.<sup>29</sup>

In India, the severe digital divide is primarily related to the low levels of overall infrastructure, education, and social and economic factors.<sup>30</sup> The urgent need for digital literacy has been further highlighted during the pandemic. Online learning has proved

to be almost unattainable for those unfamiliar with the internet,<sup>31</sup> with a large section of the student population unable to learn online.

The country's digital divide (due to lack of digital literacy) is related to the urban-rural divide and the deepening male-female digital literacy gap. Data from the 75th round of the National Sample Survey (2017-2018)<sup>32</sup> show a significant gap between the male and female population in rural and urban areas regarding operating a computer and using the internet (see Table 2).

Russia presents an entirely different case. The Russian Analytical Centre<sup>34,35</sup> regularly measures

**Table 2**  
**Share of Persons Able to Operate a Computer and Use the Internet in India**

	RURAL		URBAN	
	Male	Female	Male	Female
Able to operate a computer	12.6	7	37.5	26.9
Able to use internet	17.1	8.5	43.5	30.1

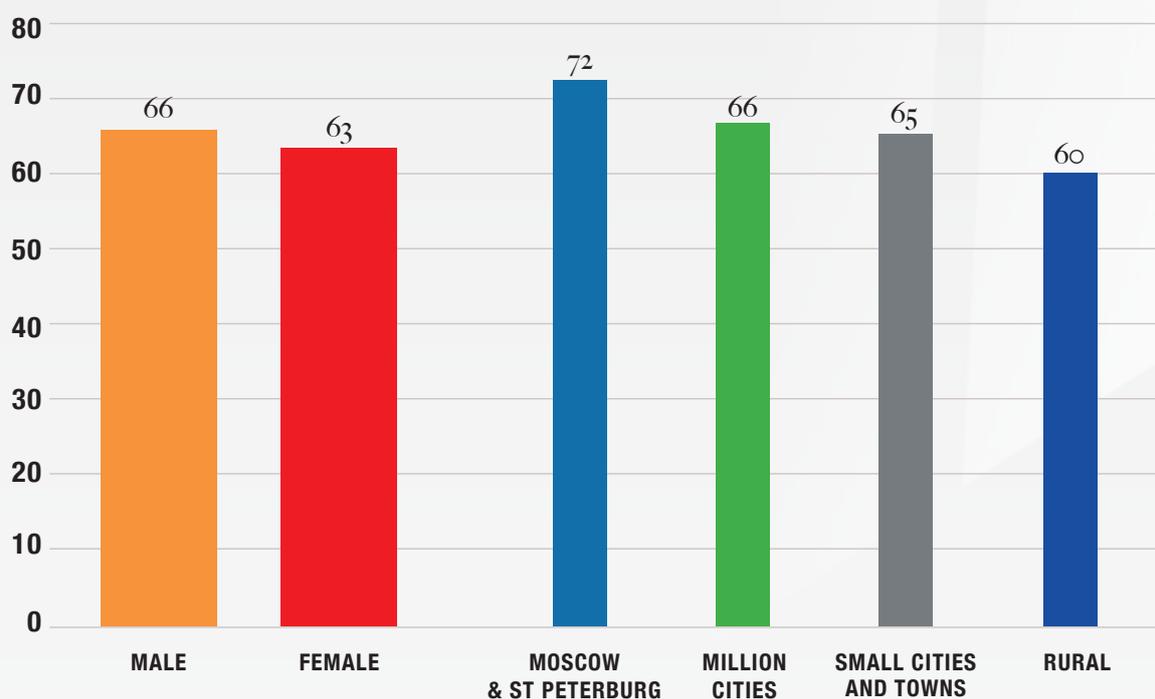
Source: Ministry of Statistics and Programme Implementation, 2019<sup>33</sup>

the level of digital literacy in the country, embodied in a national digitalisation plan. As of May 2021, only 27 percent of Russians—or one in every four—have a high level of digital literacy.<sup>36</sup> By the end of 2020, the level of basic digital competencies had grown from 66 percent to 70 percent.<sup>37</sup> However, the proportion of those with advanced digital competencies remained unchanged since 2019. Due to insufficient knowledge and skills regarding digital technologies, many people

and organisations were not ready to work remotely during the pandemic. At the same time, Russia has a relatively low level of gender and urban/rural gap in digital literacy (see Figure 1).

In South Africa, like in India, digital literacy is mainly dependent on the overall access to infrastructure and education. An additional contributor to limited digital literacy is that online academic content is mainly

**Figure 1**  
**Digital Literacy Index in Russia (in Percentage Points By Sex and Settlements)**



Source: Authors' own using NAFl data

available in English and to some extent in Afrikaans despite the country having 11 official languages. The pandemic-induced lockdown highlighted another indicator of the low level of digital literacy—about 68.4 percent of students who could move to the e-learning mode reported difficulty adapting to the online environment.<sup>38</sup> This emphasises the general lack of digital literacy among learners and educators. Had these skills been developed before the pandemic, the move would have been far more effortless.

## ASSESSING DIGITAL LITERACY

UNESCO identifies 15 different digital literacy frameworks,<sup>39</sup> including the second version of the European Digital Competence Framework for Citizens, or DigComp 2.0, which “presents a comprehensive view on competencies from economically advanced countries”.<sup>40</sup> The UNESCO’s Digital Literacy Global Framework is based on DigComp 2.0. However, the broadness of the model and a wide range of indicators make it overly complex for application in developing countries. The BRICS countries could step in with an ambitious digital literacy agenda to develop a framework that is more suitable for emerging economies. Russia and

India regularly assess the levels of digital literacy. While Russia uses DigComp 2.0, India has developed its own methodology.

The DigComp methodology was developed by the Joint Research Centre of the European Commission as a scientific project based on case studies and expert consultation. It covers 21 components of digital competence within the following five areas:<sup>41</sup>

- Information and data literacy
- Communication and collaboration
- Digital content creation
- Safety
- Problem solving

Most developing countries do not use DigComp, and instead, create more narrow national frameworks or adopt well-targeted enterprise frameworks for labour market purposes.<sup>42</sup> The Indian methodology is more focused on the realisation of national policy goals, such as the ability to deal with the e-government services and other basic activities. The PMGDisha programme assesses only the learning outcomes of its beneficiaries on the following indicators:<sup>43</sup>

- Opening an e-mail account/sending an e-mail
- Opening a digital locker (key e-government service portal in India)
- Registration on scholarship portals such as National Scholarship Portal
- Registration on online learning portals
- Submission of online application for government-to-citizens certificates, such as caste certificate, domicile certificate and income certificate
- Create login credentials for Indian Railways Catering and Tourism Corporation
- Insurance: applying online for various government-run schemes
- Execution of at least five electronic payments transactions using Indian unified payment interface

Most developing countries have more basic applied problems in digital literacy and fewer opportunities to assess a wide range of indicators. A large part of the population in emerging economies live in rural areas, especially in some of the BRICS countries (66 percent in India, 40 percent in China, according to the World Bank database<sup>44</sup>). First, concerns in using digital technologies are focused on receiving government

services remotely. This theme is also important in Russia, where digital public services are gaining momentum with 131 million people as registered users on the public services portal, Gosuslugi. As many as 234.6 million services were provided in 2020.

Access to e-governance is well reflected in the Indian assessment tool but has no highlights in the DigComp framework. The “browsing, searching and filtering data, information and digital content” competency is the closest measure in the DigComp framework but it does not reflect the specifics of e-government services and can be attributed to any information search on the internet.

Second, agriculture plays a big role in developing countries and the BRICS countries, but the application of digital technologies in this sector is missing in existing digital literacy measurement models. For instance, in China, the share of internet agricultural products retail sale was 9.8 percent in 2018 and is expected to reach 15 percent by 2025.<sup>45</sup> Brazil actively promotes digital agriculture and corresponding software and services.<sup>46</sup> India has numerous government programmes aimed at digitalising agriculture, such as the national online market (eNAM), Fertiliser Monitoring System, and the Pradhan Mantri Fasal Bima Yojana insurance programme. Russia’s agricultural ministry has developed a ‘digital agriculture platform’ project to introduce digital technologies in agriculture.

Using digital technologies for agriculture-related services can be a part of a broader accent on “use information towards professional goals”<sup>47</sup> regarded by researchers as a highly relevant part of digital literacy but underrepresented in the existing frameworks.

## CONCLUSION

Researchers and international organisations are recognising the importance of addressing digital literacy issues. However, a universal concept and assessment method is yet to be developed. The concept proposed by the advanced economies is comprehensive but does not address such critical issues for developing countries, including the BRICS, as the ability to use e-government services and the usage of internet in the agriculture field, which is an important driver of increasing/improving of digital skills for rural population.

Recognising the different goals, challenges and pace of digitalisation in the BRICS countries, and developing appropriate digital literacy indices is essential for articulating and monitoring corresponding policy measures. In relation to the actions taken by the G20 in the field of digital literacy, BRICS countries must come together to develop a more targeted concept of digital literacy that the rest of the world can adopt.

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**DR. ALEXANDRA MOROZKINA** is Associate Professor at the National Research University Higher School of Economics, and Senior Research Fellow at the Financial Research Institute of the Ministry of Finance of the Russian Federation.

**EVGENY TONKIKH** is Deputy Head, Department of International Cooperation, Radio Research and Development Institute, Russia.



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