

ASER 2023: Main findings

The ASER 2023 'Beyond Basics' survey was conducted in 28 districts across 26 states, reaching a total of 34,745 youth in the age group 14-18 years. One rural district has been surveyed in each major state, with the exception of Uttar Pradesh and Madhya Pradesh, where two rural districts have been surveyed. Data was collected regarding youths' current activity and their ability to do basic and applied tasks. Special focus was paid to youth access to digital devices and skills to do digital tasks. Youth aspirations about the future were also explored.

Key findings for the sample as a whole are summarised below. However, there are considerable differences across districts which can be seen in the individual district pages in the report.

Activity

- Overall, 86.8% of 14-18-year-olds are enrolled in an educational institution.

There are small gender gaps in enrollment, but notable differences are visible by age. Older youth are more likely to be not enrolled. The percentage of youth not enrolled is 3.9% for 14-year-old youth and is 32.6% for 18-year-olds.

- Most of the young people in this age group were enrolled in the Arts/Humanities stream.

In Std XI or higher, more than half are enrolled in the Arts/Humanities stream (55.7%), followed by STEM (31.7%) and Commerce (9.4%). Females are less likely to be enrolled in the STEM stream (28.1%) than males (36.3%).

- Only 5.6% of surveyed youth report taking vocational training or other related courses currently.

Youth at the college level are the most likely to be taking vocational training (16.2%). Most youth are taking short duration courses (of 6 months or less).

- A higher percentage of males (40.3%) than females (28%) report doing work other than household work for at least 15 days during the preceding month.

Among both males and females, most youth who are working in activities other than household work tend to be working on family farms.



Ability

For nearly two decades, ASER reports have consistently pointed to the fact that many children in elementary school need urgent support for acquiring foundational skills like reading and basic arithmetic. With this year's focus on an older age group, it is important to understand the level of basic skills among youth as well as their preparedness for tasks that go "beyond basics".

Surveyed youth were given five types of tasks. Data on four of these are outlined below: basic reading, math and English abilities; application of basic skills to everyday calculations; reading and understanding written instructions; and financial calculations that need to be done in real life. Youths' performance on digital tasks is summarised in a separate section on digital awareness and aptitude.

Basic skills in reading and arithmetic (Foundational skills in literacy and numeracy)


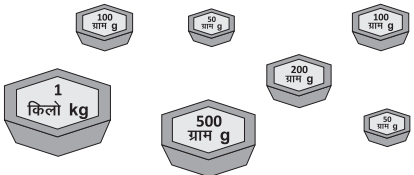
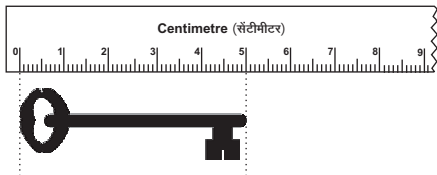
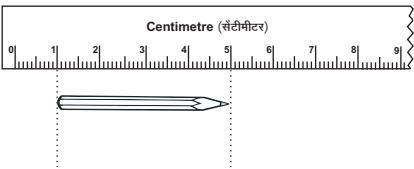
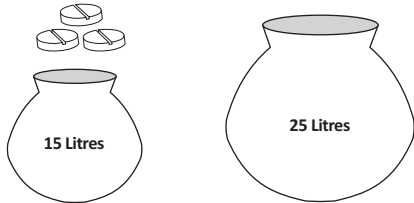
ASER READING TOOL	ASER ARITHMETIC TOOL	ASER ENGLISH TOOL																																																																								
<p>Std II level text</p> <p>हामिद के गाँव के पास एक नदी है। गाँव के लोग वहाँ जानवर चराते हैं। एक दिन शहर से कुछ लोग नदी किनारे घूमने आए। उन्होंने कूड़ा-कचरा फैलाया और चले गए। हामिद को यह देखकर बुरा लगा। उसे एक तरकीब सूझी। उसने कूड़ा डालने के लिए टोकरियाँ बनाईं। फिर नदी के किनारे कई जगह रख दी। अब वहाँ कचरा नहीं फैलता।</p> <p>Std I level text</p> <p>आसमान में बादल छाए हैं। तेज़ हवा चल रही है। बिजली भी चमक रही है। जोर से बारिश हो रही है।</p> <p>Letters</p> <table border="1"> <tr><td>ह</td><td>ख</td><td>ज</td></tr> <tr><td>फ</td><td>ट</td><td></td></tr> <tr><td>ड</td><td>ध</td><td>न</td></tr> <tr><td>व</td><td>म</td><td></td></tr> </table> <p>Words</p> <table border="1"> <tr><td>घूहा</td><td>चौकी</td></tr> <tr><td>गोला</td><td>छोटी</td></tr> <tr><td>मैल</td><td>सीटी</td></tr> <tr><td>खुश</td><td></td></tr> <tr><td>सात</td><td>पेड़</td></tr> </table>	ह	ख	ज	फ	ट		ड	ध	न	व	म		घूहा	चौकी	गोला	छोटी	मैल	सीटी	खुश		सात	पेड़	<table border="1"> <thead> <tr> <th>Number recognition 1-9</th> <th>Number recognition 11-99</th> <th>Subtraction</th> <th>Division</th> </tr> </thead> <tbody> <tr> <td>3 6</td> <td>32 84</td> <td>$92 - 68 = 24$ $35 - 17 = 18$</td> <td>$883 \div 3 = 294.33$</td> </tr> <tr> <td>9 2</td> <td>65 43</td> <td>$73 - 55 = 18$ $41 - 24 = 17$</td> <td>$4537 \div 4 = 1134.25$</td> </tr> <tr> <td>4 7</td> <td>55 18</td> <td>$53 - 38 = 15$ $96 - 77 = 19$</td> <td>$6778 \div 6 = 1129.67$</td> </tr> <tr> <td>8 5</td> <td>72 37</td> <td>$81 - 56 = 25$ $64 - 35 = 29$</td> <td>$8925 \div 8 = 1115.625$</td> </tr> <tr> <td></td> <td>29 98</td> <td></td> <td></td> </tr> </tbody> </table>	Number recognition 1-9	Number recognition 11-99	Subtraction	Division	3 6	32 84	$92 - 68 = 24$ $35 - 17 = 18$	$883 \div 3 = 294.33$	9 2	65 43	$73 - 55 = 18$ $41 - 24 = 17$	$4537 \div 4 = 1134.25$	4 7	55 18	$53 - 38 = 15$ $96 - 77 = 19$	$6778 \div 6 = 1129.67$	8 5	72 37	$81 - 56 = 25$ $64 - 35 = 29$	$8925 \div 8 = 1115.625$		29 98			<p>रहे अक्षर</p> <table border="1"> <tr><td>R</td><td>F</td><td>J</td></tr> <tr><td>T</td><td>B</td><td></td></tr> <tr><td>M</td><td>K</td><td>H</td></tr> </table> <p>छोटे अक्षर</p> <table border="1"> <tr><td>q</td><td>z</td><td>o</td></tr> <tr><td>w</td><td>a</td><td></td></tr> <tr><td>d</td><td>s</td><td>c</td></tr> </table> <p>शब्द</p> <table border="1"> <tr><td>fun</td><td>jug</td></tr> <tr><td>hot</td><td></td></tr> <tr><td>bat</td><td>sun</td></tr> <tr><td>dog</td><td></td></tr> </table> <p>वाक्य</p> <p>Where is your cow? This is a big shop. I like to read. She has a red kite.</p>	R	F	J	T	B		M	K	H	q	z	o	w	a		d	s	c	fun	jug	hot		bat	sun	dog	
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First, let us look at the current status of foundational skills for youth in the age group of 14-18.

- About 25% of this age group still cannot read a Std II level text fluently in their regional language.
- More than half struggle with division (3-digit by 1-digit) problems. Only 43.3% of 14-18-year-olds are able to do such problems correctly. This skill is usually expected in Std III/IV.
- A little over half can read sentences in English (57.3%). Of those who can read sentences in English, almost three quarters can tell their meanings (73.5%).
- Across enrollment categories, females (76%) do better than males (70.9%) in reading a Std II level text in their regional language. In contrast, males do better than their female counterparts in arithmetic and English reading.

Everyday calculations

In their daily life, people are expected to do many tasks requiring the application of numeracy. ASER 2023 explored a variety of such common calculations relevant to the daily life of youth. These included calculating time, adding weights, measuring length using a ruler and applying the unitary method.

CALCULATING TIME	ADDING WEIGHTS	MEASURING LENGTH (EASY)
 <p>If this girl sleeps at this time at night and wakes up at this time in the morning then for how many hours does she sleep?</p>	 <p>What is the total weight shown in this picture? Add and give the answer in kilogram.</p>	 <p>Using the scale shown, measure the length of the key. Give the answer in centimetre.</p>
MEASURING LENGTH (HARD)	APPLYING UNITARY METHOD	
 <p>Using the scale shown, measure the length of the pencil. Give the answer in centimetre.</p>	 <p>If 3 chlorine tablets are needed to purify 15 litres of water, how many chlorine tablets are needed to purify 25 litres of water?</p>	

- Nearly 85% of surveyed youth can measure length using a scale when the starting point is 0 cm. This proportion drops sharply to 39% when the starting point is moved. Overall, close to 50% youth can do other common calculations such as calculating time, adding weights and applying the unitary method.

Males do better than females across all everyday calculations.

Youth who have basic proficiency in arithmetic are likely to do better on everyday calculations.

Reading and understanding written instructions - daily life applications

A variety of tasks in daily life require reading and understanding written instructions. For example, for prevention of dehydration, oral rehydration measures are recommended. O.R.S. packets are available widely in rural and urban areas.

To assess whether youth are able to read and understand simple instructions, they were shown a picture of an O.R.S. packet and asked some questions regarding the information given on it. This task was administered only to those youth who could read at least a Std I level text on the basic ASER reading assessment.

READING AND UNDERSTANDING WRITTEN INSTRUCTIONS

O.R.S.
(Life Saving Solution)

Method of preparation of O.R.S.

In a clean utensil, boil 1 litre of water and let it cool.

In the cool water, add 1 full packet of O.R.S.

Mix it well.

Make the child drink the solution.

The dosage of O.R.S. should depend on age and severity of dehydration.
Child: 1-2 litres of solution to be consumed within 24 hours.
Adult: 2-4 litres of solution to be consumed within 24 hours.
 Continue the treatment till dehydration persists.

Attention:

- The prepared solution must be kept covered and consumed within 24 hours.
- Throw away the leftover solution.

This packet should be stored in a cool and dry place.
 Price: 22 Rupees
 Date of Manufacturing: March 2022
 Date of Expiry: February 2025

After reading the instructions youth were asked the following 4 questions:

- How many packets of O.R.S. should be added to 4 litres of water?
- Within how many hours should the prepared solution of O.R.S. be consumed?
- How many litres of O.R.S. solution can be given to a 45 year old man within a span of 24 hours?
- Based on the information given, can this packet of O.R.S. be consumed in March 2024?

- Among youth who can read a Std I level text or more, about two thirds can answer at least 3 out of 4 questions based on the packet.

More males (69.2%) can answer at least 3 out of 4 questions than females (61.7%).

Those enrolled in Std XI-XII or undergraduate education perform better than those in Std X or below. Less than half of unenrolled youth can answer at least 3 out of 4 questions.

Financial calculations

Youth who could do at least subtraction on the ASER arithmetic test were asked to do some commonplace financial calculations. These tasks include managing a budget, applying a discount, and calculating a loan repayment.

- Of the youth who can do subtraction or more, over 60% are able to do the budget task, about 37% can apply a discount, but only about 10% can calculate repayment.

Males outperform females across all financial calculation tasks.

Those who can do division are more likely to be able to do all these tasks.

MANAGING A BUDGET

Rate List	
Coffee.....	₹ 16
Tea.....	₹ 12
Chips.....	₹ 20
Cold Drink.....	₹ 25
Chocolate.....	₹ 14

You visit a shop where this rate list has been displayed. If you have to spend Rs. 50 completely and buy 3 different things, which 3 things can you buy?

APPLYING A DISCOUNT

This is the price of this pair of shoes and it is available at a discount of 10 percent. If you buy this pair of shoes, how much money will you spend?

CALCULATING REPAYMENT

Rates of Interest offered by Banks	
Name of Bank	Interest Rate on loan
Hamara Bank	14% per year
Paise Bank	12% per year
Naya Bank	13% per year

Loan Amount = Rs. 20,000

Ravi's mother has to buy a cow. For this, she has to take a loan from a bank. The rates of interest offered by 3 different banks have been listed below.

- Which of these banks should Ravi's mother take a loan from?
- Ravi's mother took a loan of Rs.20,000. After 1 year, what is the total amount, including the interest, that she would have to return to the bank?

The overall patterns in the “ability” domain indicate that having basic foundational skills like reading and arithmetic are very helpful for activities like everyday calculations and understanding instructions. However, not everyone who has these foundational skills can correctly complete these tasks. Females perform worse than males on almost all tasks. These data show that application of skills in daily life situations needs substantial improvement.

Digital awareness and aptitude

Since the COVID-19 pandemic, the world has become increasingly reliant on technology. ASER 2023 set out to explore the current scenario of digital awareness and ability among rural Indian youth.

The exploration of digital connectivity and skills in ASER 2023 had two components – a self-reported questionnaire capturing youths’ access to digital devices and their online habits, and an assessment of their digital skills – actually doing a set of tasks in front of the survey team using an available smartphone.

Digital access (Self-reported)

- Close to 90% of all youth have a smartphone in the household and know how to use it. Of those who can use a smartphone, males (43.7%) are more than twice as likely to have their own smartphone than females (19.8%).
- Availability of a computer/laptop in the households is much lower, with only 9% having one at home. Youth who have a computer/laptop at home are much more likely to know how to use it (85%) than those who do not (33.9%).
- Females are less likely to know how to use a smartphone or computer as compared to males.

Communication and online safety (Self-reported)

- Half of all surveyed males have an email ID, compared to slightly under 30% of females. Among enrolled youth, the likelihood of having an email ID and having sent an email increases as the level of education goes up.
- Almost all youth (90.5%) report having used social media in the reference week, with a slightly higher proportion of males (93.4%) than females (87.8%) reporting doing so.
- Of all youth who used social media, only about half are familiar with the online safety settings that were included in the survey. Males are more likely to know about these settings than females.

Education and learning (Self-reported)

- Among the youth who can use a smartphone, two thirds report having used it for some education related activity during the reference week, such as watching online videos related to studies, solving doubts, or exchanging notes.
- A quarter of youth who are not currently enrolled also report doing education related activities on their smartphone during the reference week.

Services and entertainment (Self-reported)

- Slightly over a quarter of all youth report having used a smartphone to access online services such as making online payments, filling a form, paying a bill or booking a ticket.
- Males are more likely to have accessed at least one of these services (37.6%) than females (19%).
- Close to 80% of the youth report having used their smartphone to do an entertainment related activity, such as watching a movie or listening to music, during the reference week.

Digital tasks (Actual tasks done in the presence of the survey team)

Surveyed youth were asked to bring a smartphone with good connectivity – their own, a family member’s, or a neighbour’s – for the assessment of digital skills. These included simple tasks such as setting an alarm, browsing for and sharing information, and navigating using Google Maps.

During the survey, slightly more than two thirds of youth could bring a smartphone to do these tasks. Males were more likely to be able to bring a smartphone (72.9%) than females (62%).

<p>SETTING AN ALARM</p> <p>8:30 in the morning tomorrow</p> <p>Question: Set an alarm for 8:30 in the morning tomorrow. <i>Instruction: If the phone has an AM-PM setting, ensure that the youth has selected the correct option before recording the answer.</i></p>	<p>BROWSING FOR INFORMATION</p> <p>First woman President of India</p> <p>Question: Search on the phone and tell me the name of the first woman President of India. <i>Instruction: It does not matter which search engine the youth uses to find the answer; he/she could use Google, YouTube, or any other method. He/she should be able to point to/tell you the correct answer.</i></p>
<p>USING GOOGLE MAPS</p> <p>Maps</p> <p>Question: Open Maps and tell me how much time it would take you to travel from your current location to <district name> bus/taxi stand by bike/two-wheeler? <i>Instruction: The youth should be able to do the task on an app (like Google Maps) and not on a search engine (like Google). Even if the youth simply points to the correct answer, it will be considered as correct. Ensure that the youth has chosen the correct option from two- wheeler/four-wheeler on Maps. Do not ask the youth to turn on the location.</i></p>	<p>FINDING AND SHARING A YOUTUBE VIDEO</p> <p>PMGDISHA Module 1</p> <p>Question: Find the “PMGDISHA Module 1” video on YouTube. Send/share it with a friend/family member using WhatsApp or Telegram. <i>Instruction: The youth should be able to point at the correct video after searching on YouTube.</i></p>

Of youth who could bring a smartphone, about 80% can find a specific video on YouTube and among these, nearly 90% can share it with a friend. 70% youth can browse the internet to find the answer to a question and about two thirds can set an alarm for a specific time. A little over a third can use Google Maps to find the time taken to travel between two points.

- Across all tasks, males outperform females.
- Performance on digital tasks improves with education level.
- The ability to do digital tasks increases with basic reading proficiency.

Concluding thoughts

As a country, we need to equip our young people adequately with the essential knowledge, skills, and opportunities they need to drive their own progress and that of their families and communities. India’s anticipated “demographic dividend” and “digital dividend” can achieve their full potential if this is done. The ASER report in 2017 first shone a spotlight on this age group. In the six years that have elapsed since then, the country has witnessed many changes. The ASER 2023 effort hopes to keep the focus on the age group 14-18 and continue the conversation about the way forward.