ASER 2023: Background documents

The backdrop to ASER 2023: Policies and programmes

ASER 2023 'Beyond Basics' set out with the overarching objective of generating evidence on diverse aspects of youth development in rural India, that stakeholders across sectors could use to inform policy and practice. It was therefore important to align the survey domains and competencies with national benchmarks. An in-depth literature review of international and national youth-related policies, programmes and campaigns was undertaken to guide the development of the survey and assessment tools. This enabled the survey to draw inspiration from international frameworks while grounding it within the Indian context.

Key national policies and campaigns relevant to 14-18-year-old youths' education, skilling and digital literacy in India are summarised below.

1. National Education Policy, Ministry of Human Resource Development (MHRD), 2020

The National Education Policy (NEP) outlines the vision and goals for education in India. The policy earmarks ages 14-18 (or Std IX to XII) as the 'secondary stage' of school education under its new pedagogical and curricular structure. It states that the secondary stage will comprise four years of multidisciplinary study that builds on the subject-oriented pedagogical style of the middle stage (Std VI to VIII) but with greater depth, critical thinking, attention to life aspirations and flexibility in the choice of subjects, emphasising the option to pursue vocational courses after Std X.

Chapter 3 of the policy makes it a top priority to bring 'out of school children' back into the education fold and to prevent further dropout among students, with the aim of achieving 100% Gross Enrollment Ratio from preschool up to the secondary level by 2030. It proposes to do this through careful tracking of students' enrollment, attendance, and learning levels, so that they can be provided suitable opportunities to re-enter school and/or to catch up. It stresses the importance of 'output potential concerning desired learning outcomes' over inputs, and places importance on providing career guidance and mentoring to students in school.

The NEP also envisions a rehaul of the curriculum content to focus on conceptual understanding, analysis-based learning and experiential learning by incorporating competencies such as digital literacy, scientific temper and mathematical thinking into the curriculum. The document outlines some fundamental principles, two of which are – 'emphasis on conceptual understanding rather than rote learning and learning-for-exams' and 'creativity and critical thinking to encourage logical decision-making and innovation'.

To translate this vision into reality, a big push has been given to increase flexibility in course choices in secondary school, and to reimagine vocational education as part of the mainstream. The policy advocates for 'no hard separations' between humanities and sciences, and vocational and academic streams. It aims to address the social status hierarchy associated with vocational education by introducing it in middle and high schools, so that each student can learn at least one vocation and be exposed to several more, which would help to emphasise their importance. The NEP sets the goal that at least 50% of learners through the school and higher education system shall have exposure to vocational education by 2025 and that vocational education will be introduced in all schools and higher education institutions in a phased manner in the decade of the 2020s.

Another major focus area of the policy is leveraging technology to improve educational processes and outcomes by promoting digital literacy and technology-based initiatives. The NEP proposes integration of technology into every aspect of education, including learning, assessment, planning, and administration. To achieve this, a variety of educational software packages will be developed in all major Indian languages, including the development of teaching-learning e-content delivered through platforms like Digital Infrastructure for Knowledge Sharing (DIKSHA). The policy recommends key initiatives like blended models of learning and pilot studies for online education to leverage technology. Lastly, it discusses the need to eliminate digital inequity so that the benefits of these efforts can be availed by everyone.

Mapping ASER 2023 onto NEP 2020

NEP section	Goal	What does ASER 2023 measure?
3.1, 3.3	100% Gross Enrollment Ratio target by 2030, careful tracking of enrollment and learning levels to facilitate catch-up	■ Enrollment information in school and college for youth aged 14-18 ■ Details of currently not enrolled youth including the reasons for dropping out, disaggregated by age and sex ■ Foundational reading and arithmetic levels
4.2	Stress on multidisciplinary study, with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility in choice of subjects	■ Educational and work aspirations of youth
4.9	No hard separation among arts, humanities and sciences	■ Stream selection among senior secondary school students ■ Learning outcomes of students enrolled in different streams
4.23	Curricular integration of scientific temper, problem solving and logical reasoning and digital literacy	■ Ability to apply basic reading and arithmetic to daily life tasks such as measurement, calculating interest and discounts, reading and understanding instructions, financial calculations ■ Self-reported smartphone usage for education and entertainment-related activities; accessing services ■ Ability to perform basic digital tasks such as browsing and sharing information, navigation, etc.
16	Reimagining vocational education	■ Current uptake of vocational training among youth
23.6	■ Teaching-learning e-content will be uploaded onto the DIKSHA platform ■ DIKSHA/SWAYAM will be better integrated across school and higher education	■ Use of DIKSHA platform among youth
24.2	Eliminate the digital divide through concerted efforts such as the Digital India campaign and the availability of affordable computing devices	■ Availability and ownership of smartphones among males and females, and enrolled and not enrolled youth ■ All digital usage and assessment data disaggregated by sex

2. Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), Ministry of Electronics and Information Technology (MeitY), 2017

'Digital India' is a flagship mission of the Government of India with a vision to 'transform India into a digitally empowered society and knowledge economy'. One of its three key vision areas is the digital empowerment of citizens, which includes achieving universal digital literacy. PMGDISHA was launched as part of the Digital India mission to turn this vision area into a reality. The programme objective is to make one person between ages 14-60 from every rural family digitally literate by training them to operate digital devices and to use the internet productively. As per the PMGDISHA website, 4.7 crore individuals had been certified under this programme out of its 6-crore target as of 30 December 2023.

PMGDISHA is implemented through Common Service Centres (CSCs) and envisages digital empowerment of citizens so that they can operate digital devices to access information on healthcare, education, livelihoods, and government schemes. There is also an important component of training individuals to use digital modes of payment.

The training material is available online, and spans five modules covering a vast range of topics including operating devices such as computers and smartphones, communication through social media and email, browsing, and using security mechanisms.

Mapping ASER 2023 onto PMGDISHA 2017

Module	Topic	What does ASER 2023 measure?
1	**Introduction to digital devices** ■ How to use a computer/smartphone/tablet ■ Operating basic components like charger, data cable, keyboard, mouse, etc.	■ Ownership of digital devices like computer and smartphone ■ Self-reported ability to use computer and smartphone
2	**Operating digital devices** ■ Basics of the operating system ■ Features of a mobile phone like calling and messaging	■ Self-reported ability to connect devices through bluetooth, setting a phone password ■ Assessment of ability to do basic non-internet tasks such as setting an alarm
3	**Introduction to the internet** ■ Connecting to the internet ■ Web browsers and search engines ■ Surfing the web	■ Self-reported use of the internet for browsing related to education, learning, and entertainment ■ Assessment of ability to find relevant information using a web browser
4	**Communications using the internet** ■ Email	■ Personal email ID and self-reported use of email
5	**Applications of the internet** ■ Access livelihood related information ■ Make utility bill payments ■ Book train and bus tickets ■ Access various government information and schemes ■ Using social media	■ Self-reported use of internet for accessing services like making payments, booking train tickets, filling government forms, online shopping, using navigation ■ Self-reported use of social media and its safety settings ■ Assessment of ability to do navigation/maps-related task

3. National Policy for Skill Development and Entrepreneurship, Ministry of Skill Development and Entrepreneurship, 2015

The national 'Skill India' campaign aims to empower the youth of the country with skill sets to make them more employable and more productive in their work environment. The Ministry of Skill Development and Entrepreneurship was set up to give impetus to the Skill India agenda and help create an appropriate ecosystem that facilitates imparting employable skills to its growing workforce. The primary objective of the National Policy for Skill Development and Entrepreneurship is to 'meet the challenge of skilling at scale with speed, standard and sustainability'. It is designed to bridge the gap between employers' requirements and skills in the workforce. It also discusses skilling women in non-traditional roles and increasing gender sensitivity in the workplace to catalyse productivity.

A key aim of the policy is to 'make quality vocational training aspirational for both youth and employers'. It emphasises the integration of skill training with formal education by introducing it in schools from Std IX onwards, which is also reiterated in the NEP. It calls for the establishment of an IT-based information system for 'aggregating demand and supply of skilled workforce', and the promotion of national standards in the skilling space. States will be encouraged to set up new ITIs, as well as Kaushal Vikas Kendras at the panchayat level. All skill training programmes shall include basic modules of computer literacy, finance, language and soft skills.

ASER 2023 'Beyond Basics' provides a snapshot of the uptake of vocational training and skilling courses among youth. It also records the type of institution and duration for such courses.

4. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) Guidelines 4.0, Ministry of Skill Development and Entrepreneurship, 2023

The PMKVY is the flagship scheme of the Ministry of Skill Development and Entrepreneurship. It was launched in 2015 to encourage and promote skill development in the country by providing free short-duration skill training and incentivising this by providing monetary rewards to youth for skill certification. In the 15-45 years age group, there are short-term trainings for candidates looking for fresh skilling, re-skilling/upskilling, for out-of-education candidates, dropouts and unemployed youth. There are also special projects for marginalised and vulnerable groups.

The latest version of the guidelines, released recently for the 2015 PMKVY, also aims at skill development in the country by providing free short-duration skill training and incentivising youth for skill certification. According to the guidelines document, more than 1.37 crore youths have been trained across various sectors in the 2015-22 period.

PMKVY 4.0 has been designed to make the scheme more flexible, inclusive, technology-enabled and market-driven, resulting in better employability. It calls for flexibility in course curriculum by introducing courses in partnership with industry and Ministries/Departments, and places focus on online/digital/blended skilling. Different training centres such as Pradhan Mantri Kaushal Kendras (PMKKs), PMKVY Training Centres, Industrial Training Institutes (ITIs), Skill Hubs (schools, colleges, higher education institutes), training centres of other Ministries/Departments, and training centres of industry partners are the training providers for this scheme. The Skill India Digital (SID) platform is provisioned to 'bring whole of government approach to skilling' and a 'unified registry framework'.

5. Draft National Youth Policy, Ministry of Youth Affairs and Sports, 2023

The draft National Youth Policy envisages 'synergising the hopes and aspirations of India's youth to enable harmonious growth of society'. The policy defines youth as those between 15-29-years-old, and has several thematic overlaps with ASER's Beyond Basics target age group. It is designed to equip the youth to be better and productive citizens.

Some of the important targets of the draft policy are access to social infrastructure like better quality of education, healthcare, livelihoods, and skills; attention to opportunities for women, and encouraging adaptability to keep up with technological changes. Some other targets defined by the policy include:

- To reduce the proportion of those youth who are not in education, employment or training
- To increase internet use and develop digital portals to meet information needs of youth and to connect youth to opportunities
- To improve access to experiential learning opportunities in the local community

Although the policy is in the draft stage, it is a valuable indicator of what the government plans for this large demographic.

Evolution of ASER 2023 'Beyond Basics'

The ASER survey focused on rural Indian youth in the 14-18 age group for the first time in 2017. ASER 2023 'Beyond Basics' builds on the ASER 2017 framework and adds new elements related to digital penetration and smartphone use in rural areas. The evolution of ASER 2023 'Beyond Basics' survey questionnaire and assessment tool can be traced through three phases: literature review, revisiting the domains of ASER 2017, and executing field pilots to develop and refine the questionnaire and tools.

Literature review and mapping of core domains

The first step in the development of the ASER 2023 questionnaire and tool was to conduct an exhaustive literature review of topics relevant to youth aged 14-18. These included but were not limited to formal education and vocational training, employment, aspirations, reading and math literacy, digital and financial literacy, nutrition, physical and mental health, and gender-based violence. The review encompassed international and national frameworks, policies, schemes, surveys, assessments, research studies and evidence briefs.

Keeping in mind the ASER architecture — volunteer-based, rapid and easy to administer, some important domains that required expert administration such as nutrition, mental health, etc. were dropped at this stage. Once the domains were narrowed down, relevant surveys and assessments were studied in depth to understand the format and terminology of the tasks and questions used.

Revisiting ASER 2017 domains and questions

ASER 2017 explored the following 4 domains:

1. Activity: Explored the various pathways taken by youth in terms of formal education, employment and training

2. Ability: Assessed youths' basic reading and math abilities and their ability to apply these to everyday life scenarios

3. Awareness and exposure: Examined their general knowledge and awareness regarding media, financial institutions and the digital world

4. Aspirations: Inquired into their educational and career goals.

Using the understanding developed from the literature review, these broad domains were revisited to review their relevance in 2023. Decisions pertaining to the assessment tool, designed to be a floor level test of the skills expected from children when they complete elementary schooling, were also reexamined.

This comprehensive appraisal of the ASER 2017 framework in light of the literature review revealed that several decisions taken at that time regarding the age group, scope and domains of the survey had continued to remain relevant in 2023. For instance, the National Education Policy 2020 deems ages 14-18 as the secondary stage of school education under its new pedagogical and curricular structure, making it even more pertinent to examine this age group closely. Similarly, vocational education has been given a renewed push across multiple policy documents and schemes since 2017, underlining the importance of retaining these questions.

All these factors informed the decision to retain some elements from 2017 in each of the domains of Activity, Ability and Aspirations in the 2023 survey. In addition, while many focus areas remained consistent with 2017, the literature review also pointed to the emergence of a growing area of importance – digital literacy. The pandemic resulted in an explosion in smartphone ownership and use in rural India between 2018 and 2022,[1] a period which also saw a massive push for digitalisation nationally under the government's flagship mission of 'Digital India'. This prompted us to investigate the possibility of adding 'digital skills and readiness' as a new domain in the ASER 2023 survey.

Field pilots to develop the survey questionnaire and assessment tool

A total of 10 field pilots were conducted to develop and then refine the ASER 2023 survey questionnaire and assessment tool. Since ASER is conducted across the country, most pilots were done in all states of India to ensure that the terminology of questions and pictures used in the items are appropriate across contexts. After each pilot, the survey data and qualitative feedback were used to inform modifications to the survey formats.

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[1] See Annual Status of Education Report (ASER) 2022

Pilots 1-3

The first pilot focused on developing the ASER team's understanding of the new domain — digital access and usage among rural youth — through open-ended conversations with youth guided by a semi-structured questionnaire. The conversations focused on two overarching questions: who has access to a digital device/ smartphone, and what are young people doing on these devices? The patterns that were observed in the answers received from youth in 28 states were used in conjunction with the sub-domains identified in the literature review to inform the design of a self-reported questionnaire on youths' access to and familiarity with digital devices and activities. The second pilot confirmed the suitability of using the self-reported questionnaire format for the survey. Pilot 3 was used to further refine this questionnaire and to revisit select questions from ASER 2017.

Pilots 4-6

A major decision taken in pilots 4 and 5 pertained to the addition of tasks to assess youths' digital skills. Almost all international and national research studies use the self-reported questionnaire format to gauge digital literacy. The incorporation of real-life tasks alongside self-reported questions was seen as imperative to provide a more accurate understanding of youths' digital readiness. The challenge of the high cost of procuring smartphones for assessment was tackled by using the phone that was available to the youth and that they used often, offering the added advantage of familiarity with the device on which the assessment was being conducted. Several tasks addressing key digital sub-domains of information and communication were created, tested and improved. Additionally, these pilots fine-tuned the self-reported questionnaire to reduce social desirability bias. Some new iterations of the application-based reading and math tasks were also tried, but subsequently discarded due to issues of applicability across diverse contexts.

Pilot 7

The ASER testing tool contains two samples in order to reduce the possibility of copying answers, especially in households with more than one youth. Pilot 7 was geared towards checking sample comparability by administering both samples to the same group of youth.
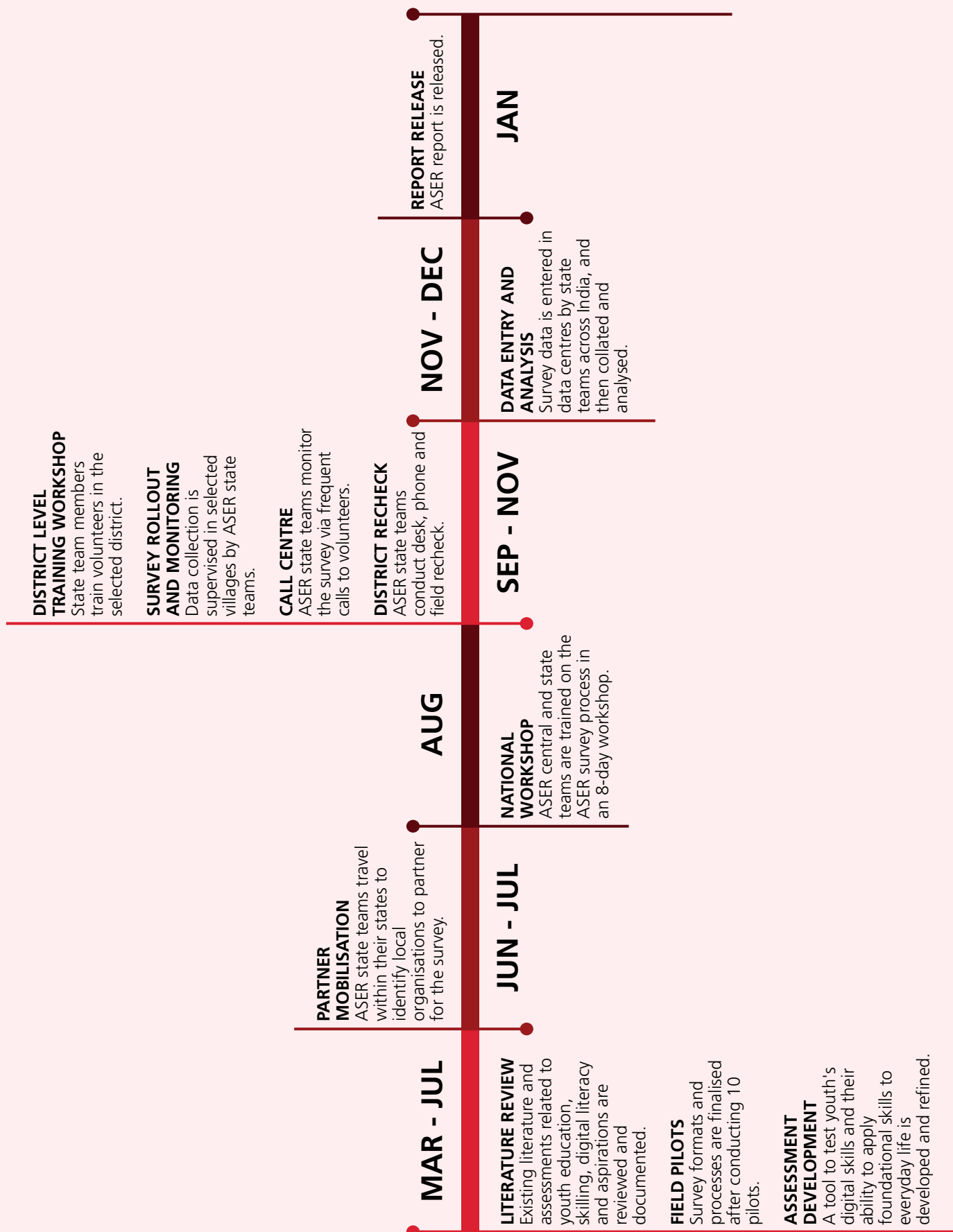
Pilots 8-9

Pilot 8 was designed to finalise the flow of the questionnaire and the terminology of each question so that surveyor training material could be created. In pilot 9, the complete survey process including mapping of the village, sampling of the households and testing youth in 20 selected households was carried out by the entire ASER team in order to understand the number of days that would be required to complete the survey in one village.
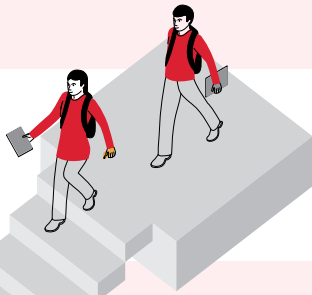
Pilot 10

The final pilot for ASER 2023 aimed to check its feasibility as a citizen-led survey. Volunteers from local partner organisations in 3 districts in 3 states were trained to conduct the survey using the final package. Detailed feedback was taken on handling of the survey and testing material, ease and time of administration, grading of answers, interest of the youth and community, etc. and relevant changes were made to the survey package.

The refinements over multiple pilot phases helped in reducing the administration time of the survey, bringing it down from one hour to 30-40 minutes per household. Given this time allocation, the survey was spread over three days in a village. 20 households in a village with youth in the 14 to 18 age group were surveyed over the weekend and an extra weekday (Friday/Saturday/Sunday or Saturday/Sunday/Monday).

ASER 2023: Survey calendar

MAR - JUL

LITERATURE REVIEW
Existing literature and assessments related to youth education, skilling, digital literacy and aspirations are reviewed and documented.

FIELD PILOTS
Survey formats and processes are finalised after conducting 10 pilots.

ASSESSMENT DEVELOPMENT
A tool to test youth's digital skills and their ability to apply foundational skills to everyday life is developed and refined.

JUN - JUL

PARTNER MOBILISATION
ASER state teams travel within their states to identify local organisations to partner for the survey.

AUG

NATIONAL WORKSHOP
ASER central and state teams are trained on the ASER survey process in an 8-day workshop.

SEP - NOV

DISTRICT LEVEL TRAINING WORKSHOP
State team members train volunteers in the selected district.

SURVEY ROLLOUT AND MONITORING
Data collection is supervised in selected villages by ASER state teams.

CALL CENTRE
ASER state teams monitor the survey via frequent calls to volunteers.

DISTRICT RECHECK
ASER state teams conduct desk, phone and field recheck.

NOV - DEC

DATA ENTRY AND ANALYSIS
Survey data is entered in data centres by state teams across India, and then collated and analysed.

JAN

REPORT RELEASE
ASER report is released.

ASER 2023: Survey process summary

A team of two surveyors (preferably one male and one female) goes to the village assigned to them by the ASER state team. They take the survey pack given to them in the training.
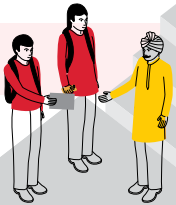
Once in the village, the surveyors meet the Sarpanch/village representative and do the following:
- Clearly explain what ASER 2023 is about and why it is important.
- Give him/her the 'Letter for Sarpanch' and ask for his/her support to conduct the survey in the village.

The surveyors then walk around the entire village and do the following:
- Make a rough map of the village, marking the important landmarks in the village. Once the surveyors have walked around the entire village, they make a final map in the Survey Booklet.
- Fill the Village Information Sheet, based on what they observe in the village.

Next, the surveyors select households to survey. They:
- Divide the map into 4 sections or select 4 hamlets.
- Randomly select 5 households with youth aged 14-18 from each hamlet/section using the 'every 5th household rule'.
- Follow this process in every section/hamlet to survey a total of 20 households (with youth aged 14-18) from the selected sections/hamlets.
- For each household approached while selecting households to survey, record some basic information about the household in the Household Log Sheet.

In each of the 20 households with youth aged 14-18 that is randomly selected for the survey, surveyors will record some information about each youth aged 14-18 who lives in the household. They will:
- Record information about the youth's activity.
- Ask questions to the youth about their aspirations and digital aptitude.
- Ask them to bring a smartphone and do some basic digital tasks.
- Assess their ability to apply foundational reading and arithmetic skills to daily life situations.
- Record information about household assets.

After all 20 households are surveyed, the surveyors check the survey booklet for completeness and then submit it to the ASER team.