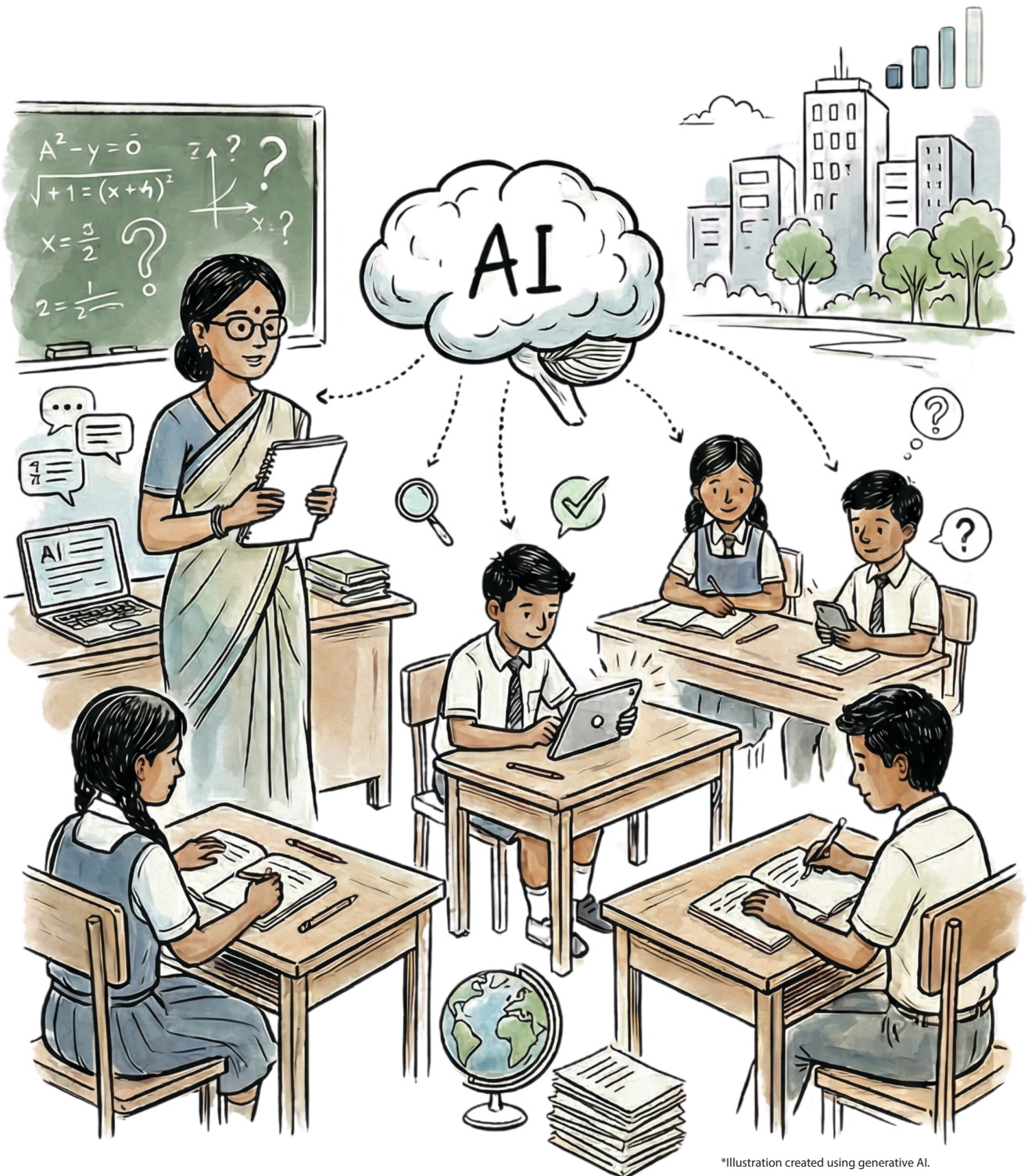


Report on AI

in School Education



Ranjitsinh Disale is an educator and practitioner with over 15 years of experience working in Maharashtra's public school system. His work focuses on understanding how classroom realities, teacher workload, and emerging technologies shape students' learning experiences. Drawing directly from sustained engagement with teachers, students, and families, this report reflects a field-informed perspective on the opportunities and risks of generative artificial intelligence in school education. The analysis is grounded in local contexts, teacher voices, and student practices, with the aim of informing ethical, equitable, and practical policy responses.

AI in School Education: Towards Ethical and Equitable Use

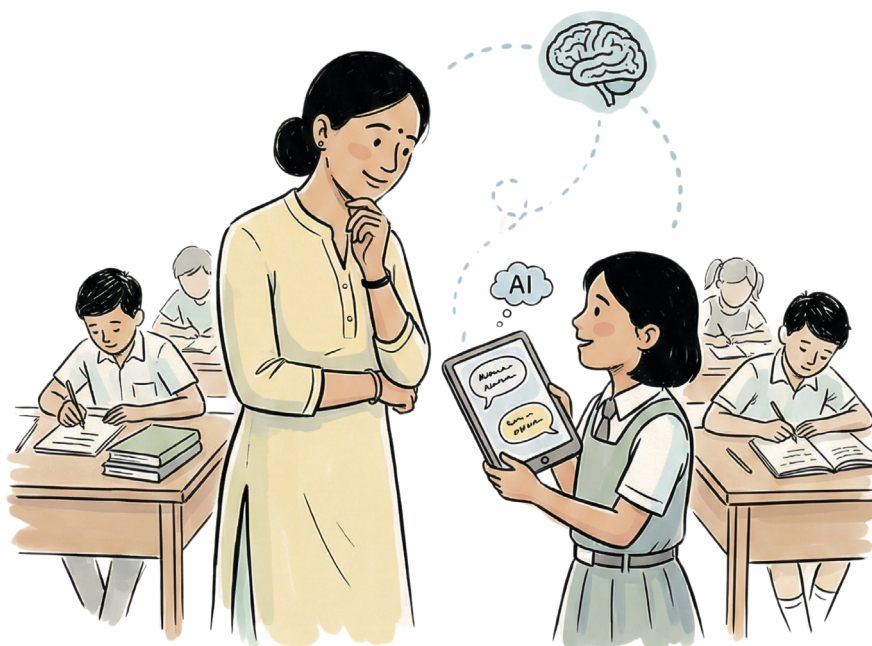
The responsible integration of AI in school education is closely linked to national education priorities, including equity, quality, and learner well-being. Effective AI governance requires evidence-based policy, teacher capacity-building, and clear norms for ethical use. This report contributes to these efforts by examining how AI is currently used by students, teachers, and parents in public schools, identifying gaps in access and understanding, and outlining policy-relevant recommendations to ensure AI supports learning rather than short-circuits it.

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This report includes analysis and visual elements created with the support of generative artificial intelligence tools.

The authors retain full responsibility for verification, interpretation, and conclusions. The views expressed in this report are those of the authors and do not necessarily reflect the views of any government or affiliated institutions. Illustrations are created using generative artificial intelligence.



Safeguarding Equitable Gen AI



The availability of Generative Artificial Intelligence (Gen AI) for public use since November 2022 has infused unprecedented challenges into all education systems. Some of these challenges arise because it is a technology that is pervasive yet inconspicuous, empowering yet inequitable.

It is pervasive because it is embedded across multiple domains of our lives, shaping teaching and learning practices. Currently, many students regularly use GenAI to learn, reduce their workload, and save time. Teachers also use GenAI consistently to design lessons, homework materials, develop assessments and feedback, and manage administrative processes. Such routines draw attention to the inconspicuous trait of GenAI. This technology is largely unnoticeable because it is freely available and it can operate without much regulation, often beyond explicit policy attention.

However, policy attention is critical because GenAI can be both empowering and inequitable. Its power lies in its ability to move beyond analysis to creation, generating novel content that helps users increase efficiency and boost productivity. Its equity, though, derives from user access and knowledge, and teacher and learner agency. This is why AI governance functions as a critical hinge: when driven by market logic and weak accountability, it reproduces existing social inequalities; when grounded in universal access, data-driven, knowledge-based frameworks, it holds the potential to disrupt ingrained educational disadvantage.

More importantly, GenAI in education does not inherently equalise or stratify learning; rather, its governance determines whether it functions as a mechanism of social reproduction or as an instrument for educational justice. Also, as GenAI becomes normalised, unequal access risks reinforcing existing educational inequalities, and uneven use increases the digital divide. This is why policy attention is increasingly urgent, given the pervasive and inconspicuous nature of GenAI.

The solution is to develop holistic policies that support national development. These policies need to integrate GenAI technology into the education system, be led by local actors, and be grounded in reliable data.

This is what this report does: it provides rich, current, and reliable data to support policy decisions that shape AI use in line with equitable and ethical principles. The current report provides baseline evidence on critical policy questions: who is using GenAI and who is being left behind; how and why GenAI is being used in primary schools in Maharashtra; and where capacity gaps exist. By making visible patterns of use that are otherwise obscured by GenAI's seamless integration into learning, the report equips policymakers and education leaders to move beyond reactive responses towards equity-oriented, evidence-informed governance.

Fundamentally, this report centres local actors as key agents of GenAI governance, highlighting the need for targeted professional learning, clear pedagogical guidance, and careful safeguarding. In doing so, it supports policy efforts to ensure that GenAI is used ethically, effectively, and inclusively—so that all students can engage with the technology in ways that support their learning, rather than deepen existing divides.

These are urgent matters that need to be considered by policymakers, answered, and then swiftly acted on. Only in this way would schools and communities receive the much-needed guidance towards goals that not only support but also advance national development initiatives.

Ramona Saraoru

Doctoral Researcher, Faculty of Education,
University of Cambridge, UK

Reflection



This report offers something both rare and urgently needed: grounded, locally generated evidence about how Generative AI is being used in classrooms. Too often, policy discussions about AI in education are shaped by assumptions, by hype, or by data drawn from contexts far removed from the schools and communities they seek to serve. What Ranjitsinh Disale and his colleagues have produced here is fundamentally different. By going directly to teachers, students and parents in Maharashtra's public schools, and by conducting all interactions in Marathi, this study centres the voices that matter most and that are too frequently unheard.

Several findings carry clear implications. The phenomenon described as 'machine-to-machine learning', in which teachers use GenAI to generate homework and students then use the same tools to complete it, with neither party disclosing their use to the other, illustrates a challenge I have long been concerned about. When AI operates inconspicuously within educational processes, without transparency or shared ethical norms, it risks undermining the very relationships upon which good teaching and learning depend. This report makes visible a dynamic that would otherwise remain hidden and, in doing so, creates the conditions for an honest and constructive response.

The evidence on equity is equally important. The finding that only 12% of female teachers engage with GenAI in their instructional practices, and that rural students face substantially lower adoption rates than their urban peers, confirms what we have observed globally: without deliberate intervention, new technologies reproduce and deepen existing inequalities. Through the work of the Institute for Ethical AI in Education, we established that equity must be a central organising principle in the governance of AI in education. This report provides exactly the kind of baseline evidence needed to translate that principle into meaningful action.

At the same time, there are reasons for genuine optimism. The finding that 98% of students routinely double-check their AI-generated answers, and that nearly a quarter use GenAI tools for practice under parental guidance, points to a behavioural readiness that should encourage policymakers. These young people are not passively consuming AI outputs; they are beginning to exercise the kind of critical engagement with technology that will be essential throughout their lives. Nurturing this instinct through structured support, teacher training and clear pedagogical guidance is one of the most important investments Maharashtra can make.

I have always maintained that AI offers a profound opportunity for educational equality, but only if it is governed wisely and with the interests of the most disadvantaged learners held firmly in view. This report, led by local actors and grounded in reliable data, exemplifies the evidence-informed approach that can ensure GenAI is used ethically, effectively and inclusively. I commend the work wholeheartedly and hope it will serve as both a catalyst for policy action in Maharashtra and a model for similar efforts across India and beyond.

Professor Rose Luckin,

University College London Knowledge Lab, UK

Machine-to-machine learning is emerging through the use of generative AI

Gen AI is rapidly reshaping the classroom dynamics, presenting both opportunities and challenges for teachers and students across Maharashtra. India's New Education Policy (NEP) 2020 emphasizes the holistic integration of AI at various levels in education. Although Maharashtra govt. has been working on its AI policy since 2024, the use of Gen AI tools in the classrooms has already begun. Reliable evidence on how students, teachers and parents are using these tools is missing. This report provides the first systematic evidence on these emerging practices.

We conducted a study on Gen AI practices in Maharashtra's public schools. We found that there is a prevalent 'machine-to-machine learning' happening in the public schools. An exceptionally high number of teachers and students are using Gen AI tools, yet none of them disclose their use to one another. Teachers are using Gen AI tools to create homework, assignments and practice materials. Students are then using the same tool to complete AI-generated homework and assignments. In effect, teachers are training the machine, and students are feeding that learning back into it. The lack of transparency about such use between teachers and students raises concerns about ethical and responsible use of Gen AI tools.

The digital divide that emerged in India with previous technological advancements appears to persist in the adoption and use of Gen AI tools. Among the students (aged 11-14) we interviewed, 32% from urban areas and 11% from rural areas reported using Gen AI tools at least once a day. According to students, the primary barriers are: limited awareness about how to use Gen AI tools, lack of training opportunities, and the absence of experts within their immediate networks. These findings suggest that the adoption gap is less about willingness and more about the absence of structured support systems.

Only 12% of female teachers reported using Gen AI tools in their instructional practices. In a context where women are already underrepresented in government schools, their limited engagement with emerging technologies further amplifies existing gender inequalities within the education system. Female teachers identified three main barriers: lack of trust in AI-generated responses, absence of training on tool usage, and network connectivity issues in their schools.

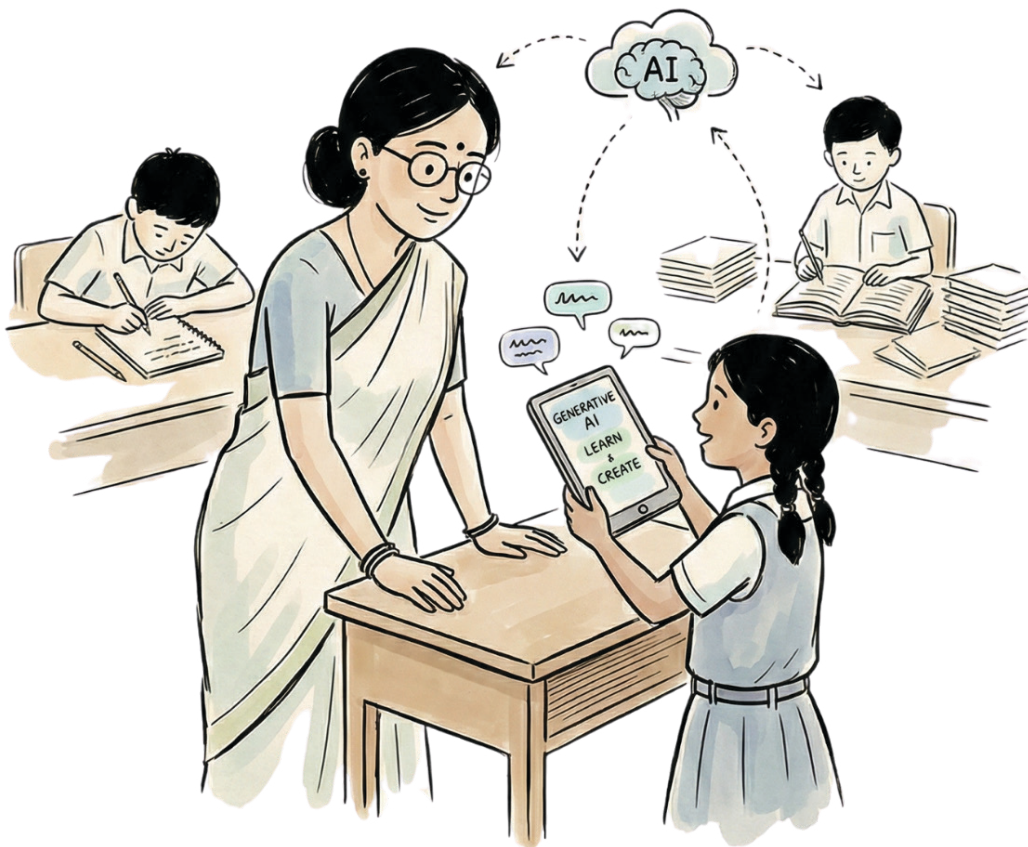
A striking institutional gap was identified during the interviews: teachers are not guiding students in AI use. While 68% of teachers actively use Gen AI tools themselves, not a single teacher reported teaching students about these tools or disclosing their own AI use. Instead, students learned about Gen AI primarily from parents (46%), social media and reels (27%), and newspapers (19%). This absence of teacher-led AI education means students are learning AI usage informally—without ethical frameworks, pedagogical guidance, or responsible use practices. The disconnect between teacher AI adoption and student AI education represents a critical missed opportunity for shaping safe and meaningful AI engagement in classrooms.

Alongside these challenges, we also observed several positive behavioural patterns. Notably, 23% of students reported using Gen AI tools for practice under parental guidance, while a striking 98% indicated that they routinely double-checked their answers. These behaviours point to a promising foundation for integrating technology into learning and for cultivating the critical skills students in Maharashtra will require in the future. These patterns suggest

that, despite existing access and capacity gaps, there is a strong behavioural readiness among students to engage with Gen AI tools.

Our findings indicate clear challenges and opportunities for Gen AI to reshape teaching and learning for teachers and students across Maharashtra. To address these, we suggest the following policy recommendations:

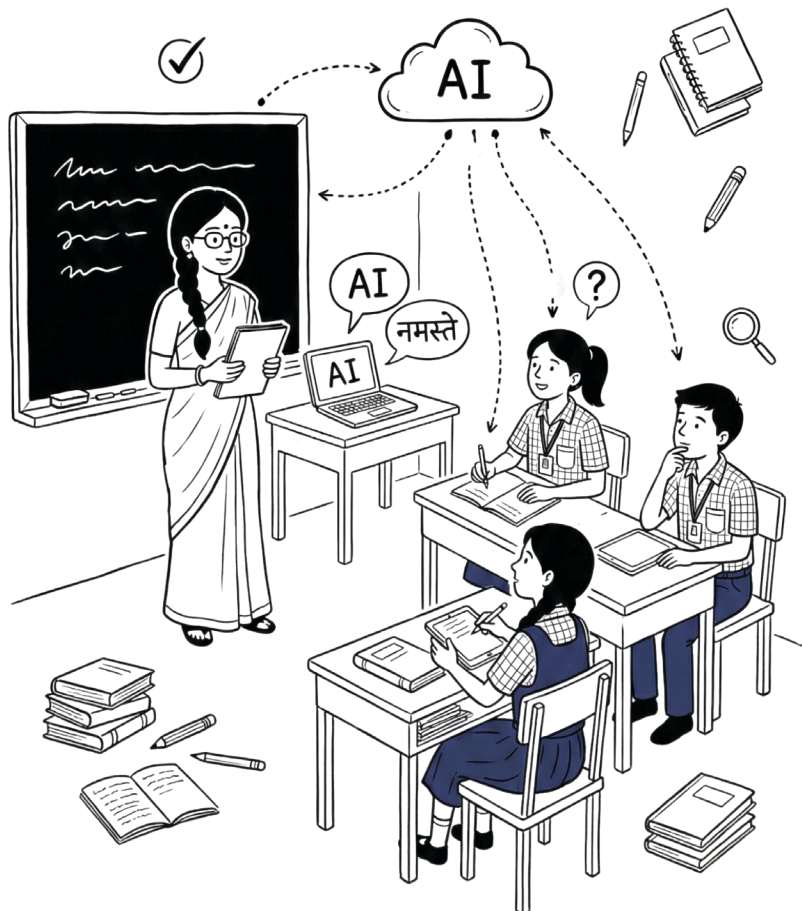
- 1.** Institutionalise AI literacy as a core component of supporting NEP 2020 aims by assigning value to digital competency. This can be achieved by developing and implementing particular policies for Gen AI related to supporting teaching and learning in our state.
- 2.** Establish clear norms and safeguards for the ethical use of Gen-AI in teaching and learning. Such norms would be explicit about what use is acceptable and unacceptable, what is considered ethical and unethical and who the key stakeholders are for implementing these.
- 3.** Build systematic teacher training programs in Marathi to support meaningful and safe AI adoption for all students. The teacher training programs should focus on improving instructional practices rather than on tools themselves.



Background and Methodology

This report is a record of students' and teachers' voices. We heard directly from the students whose education is being shaped by AI, specifically about the impact it has had on their learning, the skills it has helped develop or hinder and how they have been using AI and the support they need from teachers.

The present study was carried out using a mixed methods research design, as conceptualized by Creswell (2014), and adopted a concurrent triangulation strategy wherein both quantitative and qualitative data were collected simultaneously through structured and semi-structured questionnaires administered via telephonic and in-person conversations. The total sample comprised 1,426 respondents, including 389 parents, 578 teachers, and 459 students in the public schools in Maharashtra. The sample was randomly selected from a list of registered interested participants. This list contains information on demographic characteristics of every participant, allowing us to make sure we reach the right number of each demographic, race and gender. The dual-mode data collection strategy — combining telephonic and in-person interactions — ensured broader reach and accessibility across the diverse respondent groups, while maintaining the depth and authenticity of participant responses essential to qualitative inquiry.



Key questions / findings:

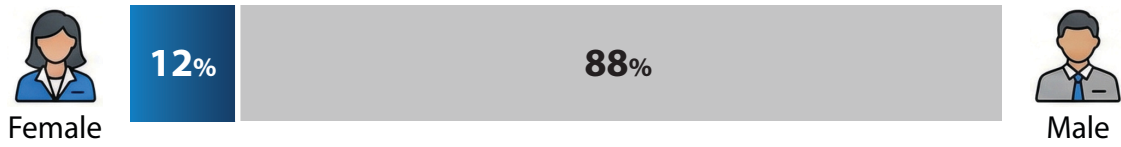
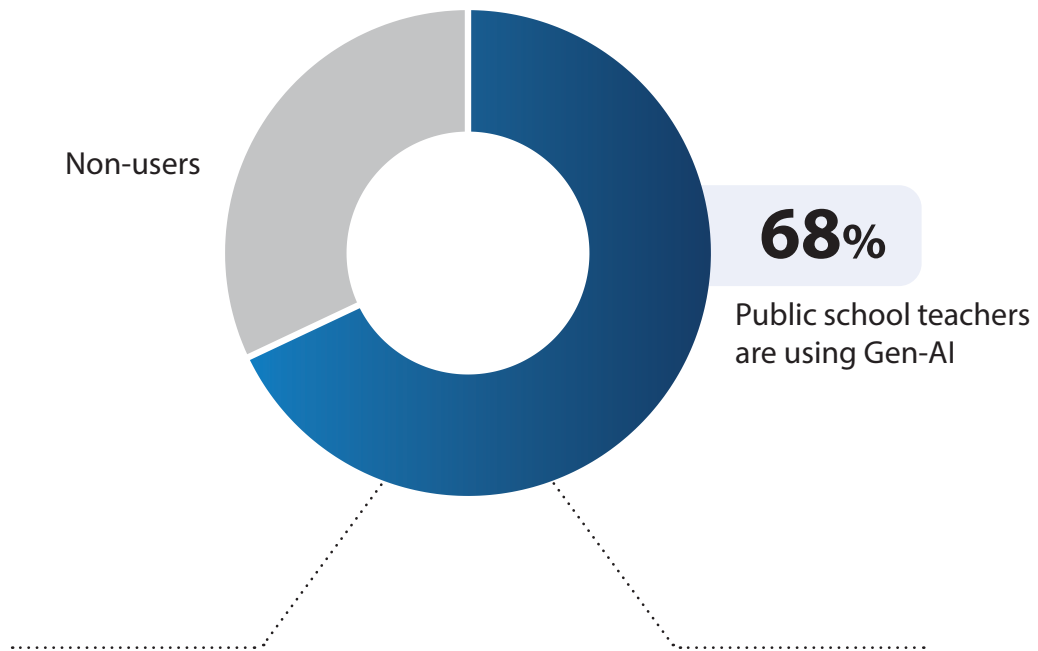


Teachers

Teachers

How many teachers are using Gen-AI tools in the classroom?

Adoption Rate:



Among these teachers only 12% are female

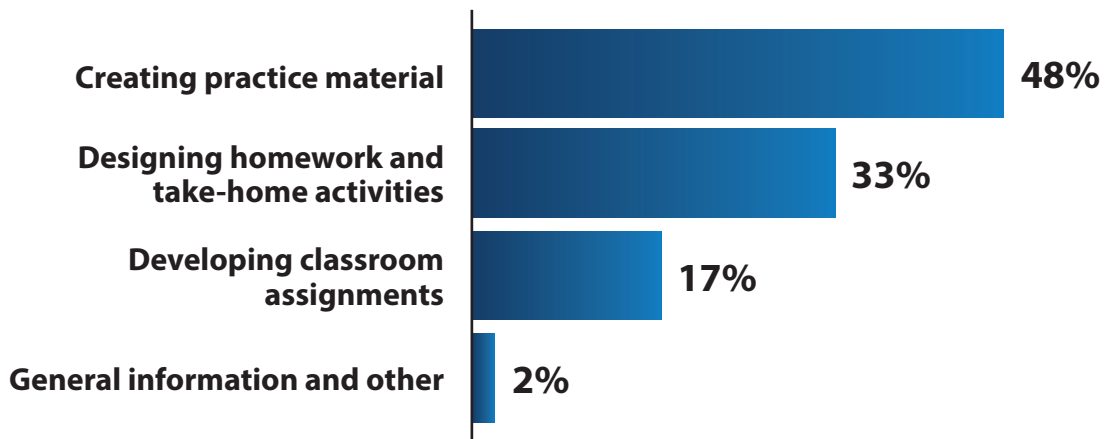


Usage frequency:
Once or twice a day
(regular use)

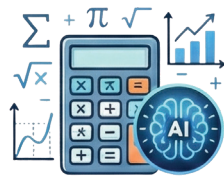


Number of tools they use:
One or two

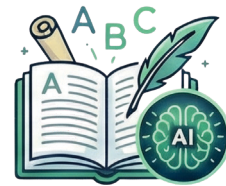
Use cases:



Subject-wise Dominance:



Math



English

are the most dominant subjects for Gen AI use by teachers.

Transparency with Students:

0% of teachers informed their students that homework/assignments/practice materials were AI-generated.

“

Gen-AI adoption among teachers is extremely high, mainly for academic purposes. However, transparency is entirely missing, raising concerns around pedagogy, ethics, and student misperceptions.

”

Behaviour & Patterns of Use:

Double Check



48%

Teachers double-check AI-generated responses.

Number of Prompts

2 **6**

Number of prompts required to get the desired response.

Prompting Language

मराठी

99%

Marathi

Platforms



Free Gen-AI tools.

Teachers were asked what first came to mind upon hearing the term "Gen AI tool." The responses were as follows:

92%

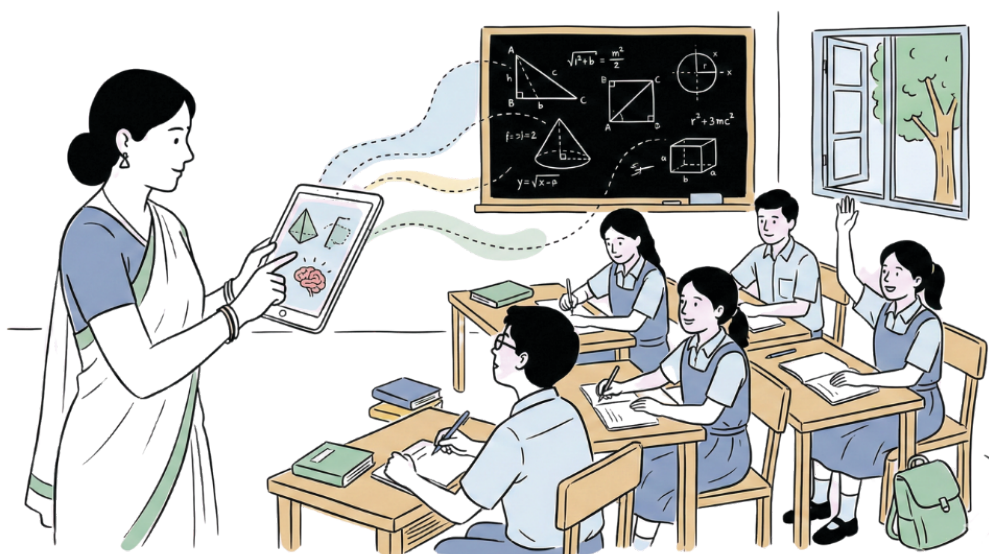
Time saving

03%

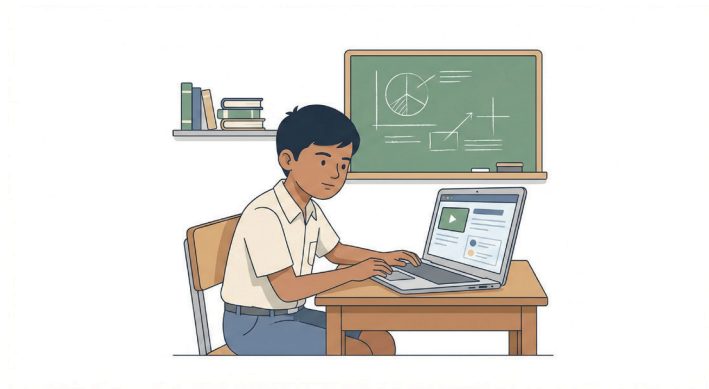
Improve productivity

02%

Fun



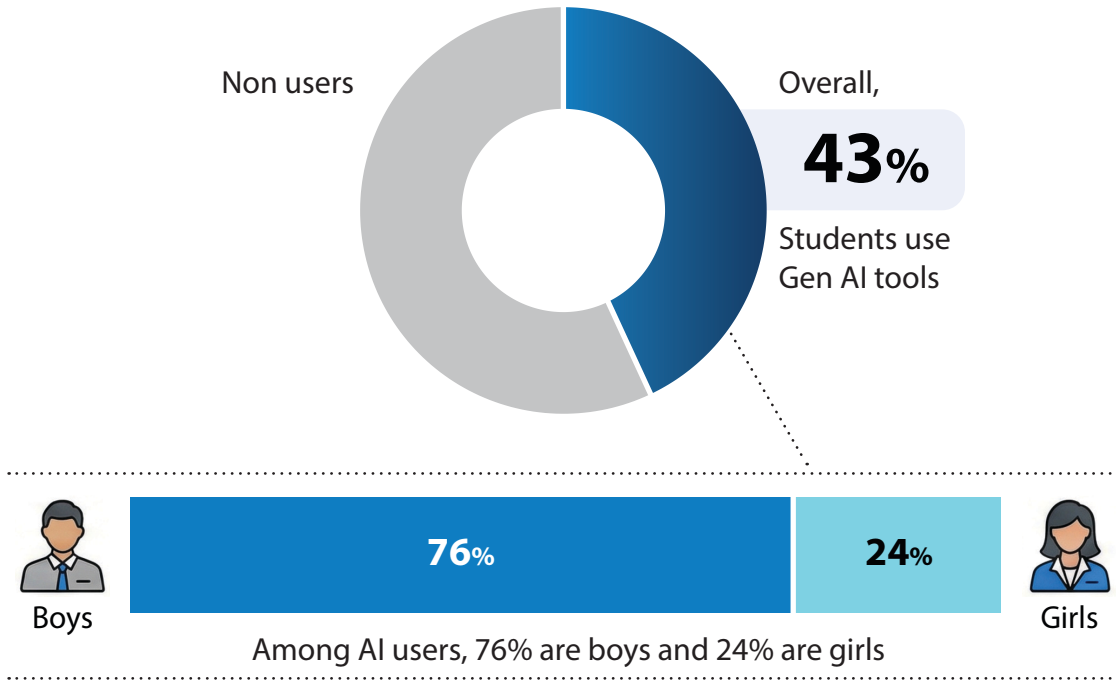
Key questions / findings:



Students

Students

How many students are using Gen-AI tools in the classroom?



32% of urban students reported daily use, compared to **11%** of rural students.

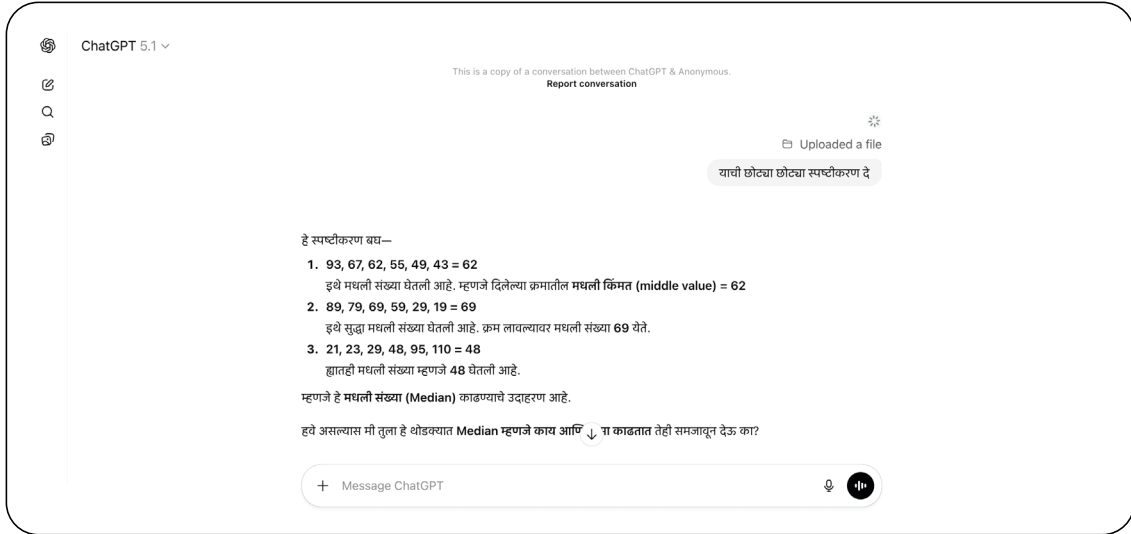
Use Cases:

Sample use-case : 1



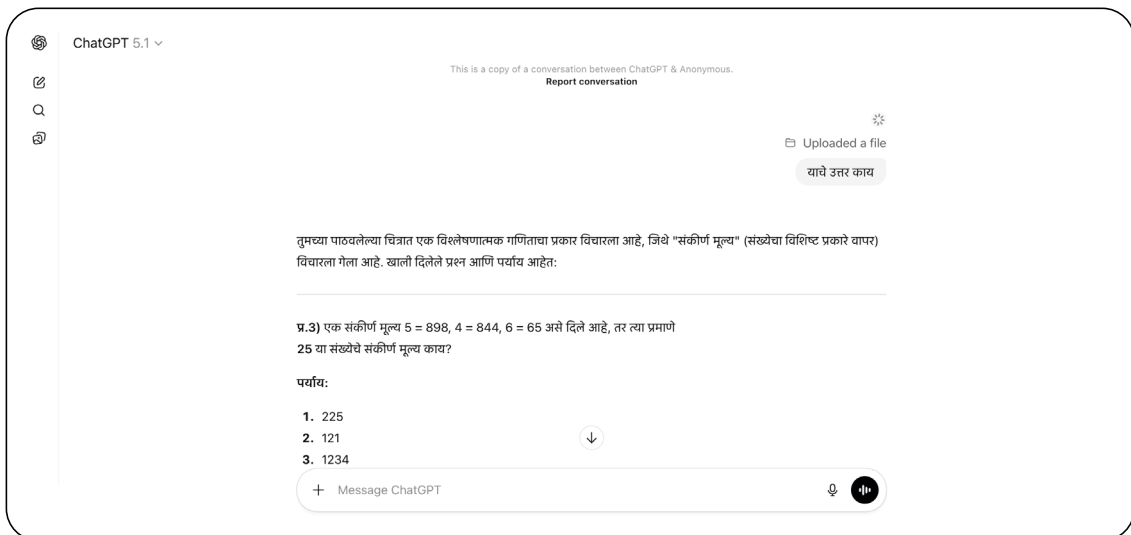
For those who don't understand Marathi:
 Student clicked a photo of a homework sheet and uploaded to GPT and simply prompted – “read a question and give me correct answer.”

Sample use-case : 2



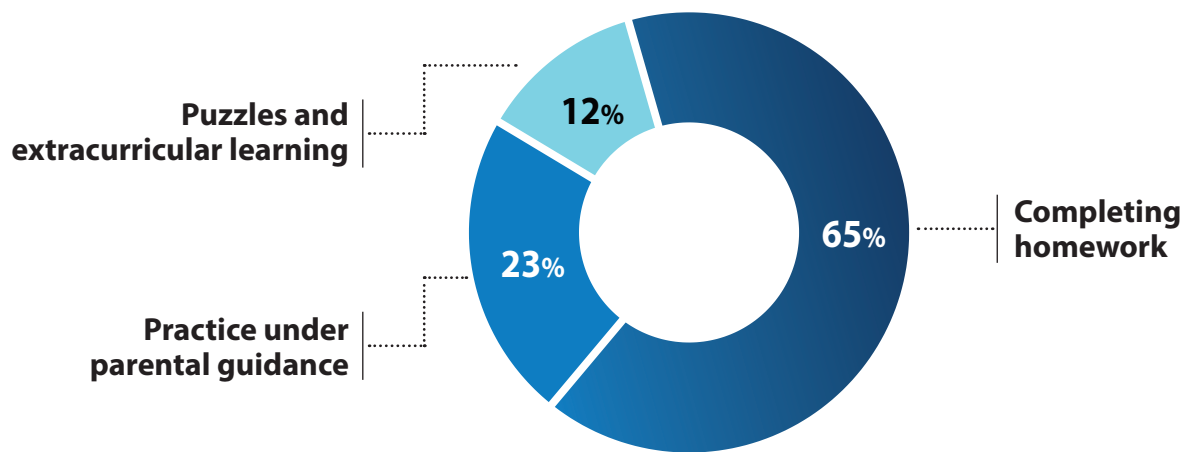
For those who don't understand Marathi:
Student clicked a photo of a homework sheet and uploaded to GPT and simply prompted – “explain in short”

Sample use-case : 3



For those who don't understand Marathi:
Student clicked a photo of a homework sheet and uploaded to GPT and simply prompted – “tell me the answer”

Purpose of Use:

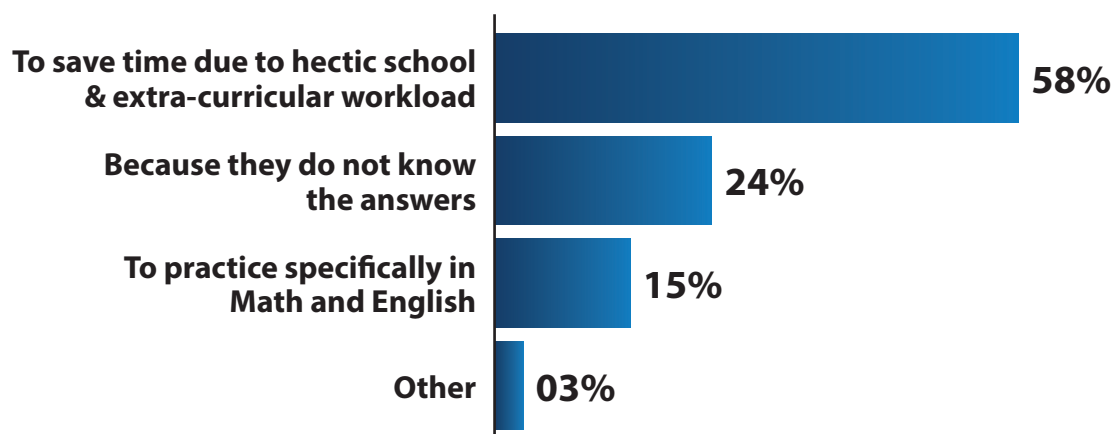


“

No student disclosed to their teachers that their homework was completed with the help of Gen-AI — they simply copied the answers.

”

Why students are using Gen AI tools?



- More than half of the students we interviewed reported using Gen-AI tools not to improve learning experiences but to reduce workload and save time — however, their use remains hidden from teachers, raising questions about transparency, academic integrity, and learning purpose.
- Awareness about responsible and ethical use of Gen-AI tools among students is critically low. Merely 1.2% of teachers reported knowing that students were using Gen-AI tools to complete homework, and this insight emerged solely through parental disclosure, not through instructional monitoring or assessment systems.

Behaviour & Patterns of Use:

Double Check



98%

Students double-check AI-generated answers.

Number of Prompts

2 **12**

Number of prompts required to get the desired answer

Prompting Language



Most students use their mother tongue while prompting.

Platforms



Students are using on free Gen-AI tools.

How did they get to know about Gen AI tools?



46%

Parents



27%

Reels/YouTube/
Social Media



19%

Newspaper



05%

Friends



03%

Others

Students were asked what came to their mind first, when they heard “Gen AI tools”, their responses were:

96%

Copying answers /
short cut

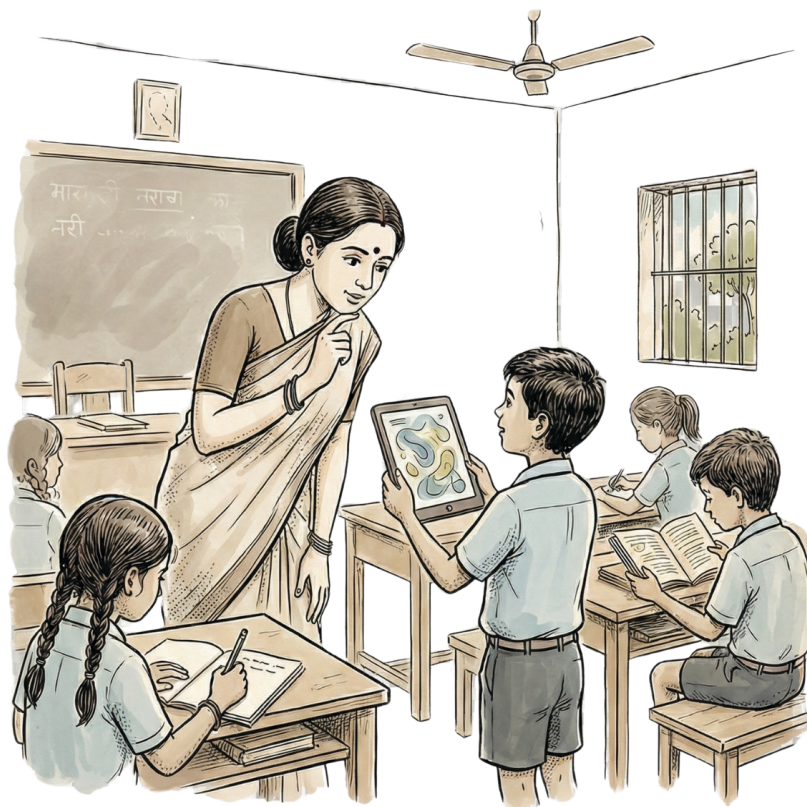
02%

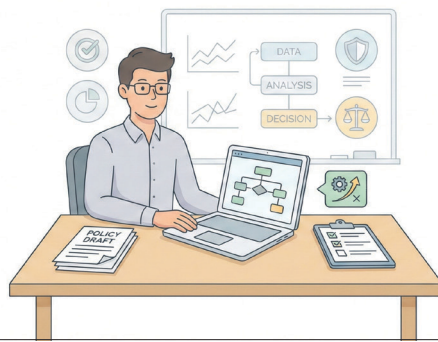
Saving time

“

Students’ mental model of Gen-AI is predominantly aligned with copying rather than learning, indicating a need to reframe AI from a shortcut tool to a learning-support tool.

”





Policy Recommendations

Policy Recommendations

To reshape teaching and learning for teachers and students across Maharashtra and address the challenges and opportunities brought by GenAI, we have the following recommendations, and suggest the possible mechanisms, stakeholders and timelines:

Recommendation	Action Items	Possible mechanism	Possible stakeholder	Suggested timeline
Institutionalise AI literacy as a core component of supporting NEP 2020 aims by assigning value to digital competencies	<ul style="list-style-type: none"> - Integrate AI literacy modules into the existing curriculum framework - Create an AI Competency Certification Program 	A policy mandate on AI literacy	School Education and Sport Department, Government of Maharashtra	2 years
Establish clear norms and safeguards for the ethical use of Gen-AI in teaching and learning	<ul style="list-style-type: none"> - Develop a Maharashtra Gen-AI Ethics Framework - Mandate AI-Disclosure labels on all teacher created materials (homework/ assignments/ practice sheets) and establish student self-declaration system for AI assisted work 	Policy mandate on the ethical use of Gen-AI	SCERT, Maharashtra	3-6 months
Build systematic teacher training programs to support meaningful and safe AI adoption for all students	<ul style="list-style-type: none"> - Design gender-responsive AI training programs with women-only cohorts, female AI mentors, offline training modules for low-connectivity areas. - Design multi-tier Teacher AI certification Program - Establish Teacher AI Mentor network 	Policy mandate on the Gen-AI-related teacher training	SCERT, Maharashtra	1 year-ongoing



Report on AI in School Education

Acknowledgment

We express our sincere gratitude to all the esteemed faculty members, policy advisors, research assistants, and teachers who contributed their valuable time, guidance, and support to prepare this report.

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| • Ganesh Devkar | | • Yashvant Bhosale |
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