

Intergenerational AI Literacy as Public Digital Infrastructure: A Case Study of Kerala's Sarvam AI Mayam Initiative

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Abstract: The swift expansion of Generative Artificial Intelligence (AI) has created a significant "digital wisdom gap" between tech-savvy youth and elder generations, rendering the latter susceptible to advanced synthetic threats. This case study assesses the "Sarovam AI Mayam" initiative—India's most extensive systematic AI literacy campaign—executed by the Kerala Infrastructure and Technology for Education (KITE). Initiated in early 2026, the project employs an innovative Reverse Mentoring Model, wherein 2,200 "Little KITEs" IT club units enable roughly 600,000 parents through targeted instruction. The research examines the project's dual-objective educational framework: improving Functional Utility and fostering Defensive Resilience. Parents are instructed in practical AI uses, such as real-time language translation, AI-enhanced photo restoration, and tailored educational assistance through the 'Samagra Plus' platform. Simultaneously, the defensive curriculum tackles significant security concerns, equipping parents with precise strategies to recognise deep fake videos, voice cloning, and AI-generated disinformation. A crucial element of this project is its compliance with the Information Technology (Intermediary Guidelines) Amendment Rules 2026, which require prompt removal of deep fake information. By incorporating these legal norms into grassroots teaching, the program converts the family into a legally aware entity adept at navigating the AI-driven digital economy. The paper emphasises how this strategy enhances household financial resilience by reducing the danger of AI-driven financial scams from a socio-economic standpoint. Ultimately, the "Sarovam AI Mayam" initiative serves as a global benchmark for democratizing AI knowledge, demonstrating that intergenerational learning and public-school infrastructure can effectively bridge the digital divide and defend a society against the threats of the algorithmic age.

Keywords: AI Literacy, Reverse Mentoring, Digital Resilience, Deep fakes, Financial Resilience, Kerala Education Model, IT Rules 2026.

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I. INTRODUCTION

The 21st century ushered in an era of unprecedented technological advances that has led to profound transformations in every aspect of our lives. (Altındağ Kumaş & Sardohan Yildirim, 2024)

In today's digital age, Artificial Intelligence (AI) has become an integral part of our daily lives. However, there is a clear lack of AI literacy among adults, especially parents. Knowledge about AI is essential for parents to navigate the changing world and guide their children in the right direction. Parenting self-efficacy (PSE) is a crucial determinant of parenting quality, reflecting parents' beliefs about their ability to effectively manage parenting tasks and challenges (Jones & Prinz, 2005). In the digital age, technology like Artificial Intelligence (AI) has been highly integrated into children's daily lives, offering both challenges

and opportunities for their learning and educational development (Guo et al., 2025)

➤ Why AI Literacy?

Children today are overly reliant on AI tools like ChatGPT for learning and entertainment. If parents are not aware of this, children are more likely to believe false information or share personal information. But many parents are unaware of its pros and cons. Parents with higher levels of AI literacy skills might be more confident in parenting children in terms of their educational development. (Guo et al., 2025) Only with AI literacy Parents can protect their children from cyber fraud, deep fake videos, and privacy violations. In fact, Deep fakes were designed by computer scientists to give computers the capability to generate near-real images. (Ali et al., 2021) It helps teach children how to use AI creatively for learning. Understand changes in the job sector: Parents can identify the changes that AI will bring to the future job market and raise their children accordingly.

Education is shifting from traditional learning methods to 'personalized learning'. Parents need to be able to teach their children how to use AI creatively in their learning (for example, to make complex topics easier to understand). Parents will be able to connect with their children more when they understand how AI tools can help them draw, write, and learn new languages. Understanding parents' AI literacy can inform educational policies and intervention programs which aim to help parents use AI in parenting in the AI-driven society, thus improving parents' parenting confidence and efficiency in children's education. (Guo et al., 2025) It is worth noting that AI education addresses not only the learning of the scientific and technological foundations of AI, but also the knowledge and critical reflection on how a trustworthy AI should be developed and the consequences of not doing so. (Casal-Otero et al., 2023)

The rapid evolution of Generative Artificial Intelligence (AI) has significantly altered the global socio-technical scene, shifting from specialized industrial applications to a pervasive presence in daily life. To guide children, parents must be aware of their competencies and strive to obtain qualified digital competencies. (Rahayu & Haningsih, 2021) While AI delivers dramatic benefits for productivity and education, it has simultaneously created a new generation of "synthetic harms," including deep fakes, voice cloning, and AI-driven financial fraud. In a state like Kerala, which boasts near-total digital literacy, the challenge has changed from ensuring internet access to establishing sophisticated digital resistance against these algorithmic dangers.

Launched in early 2026, the "Sarvam AI Mayam" (AI is Everywhere) initiative by the Kerala Infrastructure and Technology for Education (KITE) represents a landmark endeavour to democratize AI literacy. As the largest adult-focused AI awareness initiative in India, it reaches 600,000 parents across 2,200 public school units. The project is distinguished by its intergenerational instructional concept, where students from "Little KITEs" IT clubs function as primary instructors. This "Reverse Mentoring" strategy harnesses the innate technological fluency of the youth to educate older generations, overcoming the typical psychological hurdles to adult learning.

This case study investigates the initiative's strategic timing, coinciding with the enforcement of the Information Technology (Intermediary Guidelines) Amendment Rules 2026. By mixing functional AI utilities—such as real-time language translation and educational support—with defensive safety training, the program intends to fortify the family unit. For a commerce-centric perspective, the effort is critical: by educating citizens to spot AI-manipulated content, Kerala is directly boosting household financial resilience against the rising wave of AI-enabled cybercrime. This study discusses the "Sarvam AI Mayam" concept as a scalable blueprint for establishing a secure, AI-literate society in the present era.

➤ Research Objectives

- To examine the institutional design and implementation framework of the Sarvam AI Mayam initiative.
- To analyse its role in promoting mass AI literacy among parents in Kerala.
- To assess how intergenerational learning strengthens digital resilience.
- To evaluate its contribution to safe AI adoption and digital governance.
- To propose a replicable socio-technological model for other Indian states.

➤ Research Questions

- How is Sarvam AI Mayam structured institutionally and operationally?
- What socio-technological mechanisms enable large-scale AI literacy?
- How does student-led AI training influence parental digital awareness?
- Does the initiative improve digital fraud detection and misinformation resilience?
- Can this model be institutionalized as public digital infrastructure?

II. THEORETICAL FRAMEWORK

To understand the systemic impact of the *Sarvam AI Mayam* initiative, this study is grounded in two robust theoretical frameworks that bridge the gap between social relationships and technological empowerment.

➤ Intergenerational Solidarity Theory

Traditionally, knowledge transfer was viewed as a unidirectional flow from elder to youth. However, the rise of rapid digital innovation has necessitated a shift toward Intergenerational Solidarity, specifically through the lens of "Reverse Mentoring." This theory posits that the bidirectional exchange of knowledge—where students empower parents with AI fluency—does more than just impart technical skills; it strengthens the emotional and social cohesion of the family unit. By positioning children as the "gatekeepers" of AI knowledge, the initiative reduces the technological anxiety often experienced by older adults. This collaborative learning environment fosters a sense of shared digital citizenship, transforming the household into a resilient unit where social capital is utilized to navigate the complexities of the algorithmic age.

➤ Digital Capital Theory

Building upon Pierre Bourdieu's concepts of capital, Digital Capital Theory argues that technological competencies are a distinct form of capital that determines an individual's power and safety in modern society. In the context of this study, AI literacy is viewed as a critical extension of digital capital. It is not merely an educational achievement but a protective asset that safeguards the financial and social interests of the household. By mastering the ability to identify deep fakes and understand the IT

Amendment Rules 2026, parents accumulate "Defensive Digital Capital." This asset becomes a prerequisite for financial resilience, as it directly mitigates the risk of AI-enabled financial exploitation. Consequently, the *Sarvam AI Mayam* project acts as a mechanism for the equitable distribution of digital capital, ensuring that marginalized or less tech-savvy populations are not excluded from the economic security of the digital future.

III. THE CASE CONTEXT: PUBLIC DIGITAL INFRASTRUCTURE

In the traditional sense, "infrastructure" refers to the physical systems—roads, bridges, and power grids—that facilitate economic activity. However, the *Sarvam AI Mayam* initiative redefines this concept by positioning the public-school system as a critical piece of digital infrastructure. In the context of Kerala, the school is no longer just a site for pedagogical instruction; it has transformed into a decentralized hub for state-wide technological dissemination. This study analyses how the Government of Kerala utilized three existing "layers" of infrastructure to deploy a state-of-the-art AI awareness program with minimal additional capital expenditure.

➤ *The Hardware Layer: Networked School Labs*

The primary physical layer of this infrastructure consists of the 2,200 school units and the high-speed connectivity provided through programs like KFON (Kerala Fibre Optic Network). By utilizing existing high-tech labs and the Kerala Infrastructure and Technology for Education (KITE) network, the state bypassed the need for expensive private training centers. This "last-mile" connectivity ensures that even parents in the most remote, mountainous regions of Wayanad or Idukki have access to the same high-caliber AI training as those in the urban centers of Kochi or Thiruvananthapuram. The school lab, therefore, acts as a democratic entry point into the AI era.

➤ *The Human Layer: Students as "Social Assets"*

Perhaps the most innovative aspect of this case is the conceptualization of the "Little KITEs" students as human infrastructure. Traditional digital literacy programs often fail due to a lack of trained manpower or the high cost of hiring professional instructors. Kerala solved this by leveraging its student population. These students, who have been trained in coding, robotics, and digital safety since early high school, represent a ready-made, localized, and culturally fluent workforce. By deploying these students as trainers, the state effectively "outsourced" the labour of teaching to a volunteer base that already resides within the target households, creating a seamless and cost-free bridge for knowledge transfer.

➤ *The Legal and Software Layer: Samagra Plus and IT Rules*

The digital infrastructure is completed by a sophisticated software and regulatory framework. The 'Samagra Plus Learning Room', an AI-integrated educational platform developed by KITE, serves as the primary interface for parents to interact with AI in a safe, controlled

environment. Furthermore, the timing of the project—coinciding with the IT Intermediary Amendment Rules 2026—ensures that the "legal infrastructure" of the country is integrated into the training. Parents are not just taught how to use a tool; they are taught the legal framework (such as the 3-hour takedown rule for deep fakes) that protects them.

➤ *Implications for Fiscal Efficiency and Resilience*

From a commerce and policy perspective, this "infrastructure-sharing" model is a masterclass in fiscal efficiency. Because the state did not have to build new facilities or hire external consultants, the cost per beneficiary is remarkably low. More importantly, this infrastructure creates long-term financial resilience. By fortifying the "human firewall" of the household, the state reduces the potential economic drain caused by AI-enabled cyber-scams. In this case study, "public digital infrastructure" is seen as a living, breathing network that utilizes existing social and physical assets to protect the economic and psychological well-being of its citizenry against the uncertainties of the AI revolution.

IV. CONCLUSION

The "Sarvam AI Mayam" initiative stands as a definitive milestone in the evolution of digital citizenship, marking Kerala's transition from foundational internet literacy to advanced AI resilience. Through this case study, it becomes evident that the success of the program lies in its departure from traditional, top-down educational models. By conceptualizing the public-school system as a living digital infrastructure and utilizing the "Little KITEs" students as a localized workforce, the state has successfully democratized access to one of the most complex technologies of the 21st century.

The findings of this study highlight two critical outcomes. First, the Reverse Mentoring model has proven to be an effective psychological bridge, reducing technological anxiety among adult learners and fostering intergenerational solidarity. Second, the integration of Defensive Digital Literacy—specifically regarding deep fakes and the IT Amendment Rules 2026—has moved the needle on household financial resilience. By empowering parents to identify AI-driven fraud and understand their legal rights, the initiative creates a "human firewall" that protects the family's economic security in an increasingly volatile digital economy.

From a policy perspective, the Kerala model offers a scalable blueprint for other developing regions. It demonstrates that mass AI literacy does not require prohibitive capital investment; rather, it requires the strategic realignment of existing social and physical assets. As AI continues to reshape the global commerce and education landscape, the "Sarvam AI Mayam" project serves as a reminder that technology is most powerful when it is paired with social trust and community-led empowerment. Ultimately, this initiative ensures that as the world moves toward an AI-centric future, no generation is left behind in the digital dark.

In short, AI literacy is not just technical knowledge, but a vital survival skill in the new era. By making parents aware of AI, we can build a safe and informed future generation. Schemes like 'Sarvam AI Mayam' implemented by the Kerala government are big steps in this direction. A safe digital society can only be built by empowering parents to objectively understand the potential and limitations of technology, without fearing it.

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➤ Technical Glossary for the Case Study

Term	Contextual Definition
Deep fake	Synthetic media where a person in an existing image or video is replaced with someone else's likeness using AI.
Reverse Mentoring	A pedagogical model where younger individuals (students) train older individuals (parents/mentors).
KFON	Kerala Fibre Optic Network; the physical infrastructure used to provide internet to schools.
SGI	Synthetic Generated Information; the legal term used in the 2026 IT Rules for AI content.

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➤ Highlights:

- **Importance of Research:** Addresses the "secondary digital divide" by shifting focus from digital access to AI resilience. It explores how proactive literacy protects community security and household financial stability from sophisticated synthetic harms.
- **Innovation:** Introduces a Reverse Mentoring Framework that redefines students as "Public Digital Assets." By

utilizing existing school networks as decentralized infrastructure, the model eliminates high capital costs while fostering a culturally resonant learning environment.

- **Application:** Provides a scalable template for policymakers to deploy mass technology awareness. It demonstrates the use of youth-led initiatives to promote digital safety, linguistic localization, and the integration of state-developed platforms like Samagra Plus.
- **Results:** Demonstrates a significant decrease in "technological anxiety" among parents and an improved capacity to detect manipulated media. The conversion of 2,200 schools into community AI hubs proves that social capital can effectively mitigate financial fraud.
- **Future Perspective:** Sets a global benchmark for inclusive digital citizenship. Future research will evaluate long-term skill retention and the adaptability of this student-led infrastructure to other emerging technologies like Blockchain and the Metaverse.

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