

Digital Parenting in the AI Era: Managing children's technology use through Smart AI devices

¹Dr. Anand Muley, ²Debidutta Acharya, ³Dr. Manisha Kaushal Arora, ⁴Dr. Vijeyata

¹Associate Professor, Department of Commerce, J. M. Patel Arts, Commerce and Science College, Bhandara, Maharashtra

²Assistant Professor (MBA) College Of IT and Management Education (CIME) A Constituent college of BPUT, Odisha, India

³Associate Professor, CMS Gitarattan International Business School

⁴Associate Professor Department of Management Studies GL Bajaj Institute of Technology and Management, Greater Noida Affiliated to AKTU, Lucknow.

Abstract:

The rapid advancement of Artificial Intelligence (AI) and wide-spread adoption of smart AI-enabled devices have transformed the way children learn, communicate, and engage with digital environments. While these technologies offer significant educational, cognitive, and social benefits, they also present challenges related to excessive screen time, privacy concerns, exposure to inappropriate content, cyber risks and reduced face-to-face interactions. Digital parenting has appeared as a critical approach for guiding children's responsible and safe use of technology in the AI era. This study explores the role of parents in managing children's technology use through smart AI devices such as smartphones, tablets, smart speakers, virtual assistants, educational application, and AI-powered learning platform. This study examines parental awareness, digital literacy, monitoring practices, communication strategies, and establishment of healthy technology boundaries. It further investigates how AI-based parental control tools, content filtering systems, and usage-monitoring applications can support effective digital parenting. Findings suggests that proactive parental involvement, digital literacy enhancement, and the ethical use of AI technology contribute significantly to fostering responsible digital behaviour among children. A sample of 339 was collected to identify the result of the study. The factor influencing Digital Parenting in the AI Era are AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication and AI-assisted learning and education benefits.

Keywords: Digital parenting, Artificial Intelligence, Smart AI devices, Parental monitoring, digital literacy, online safety

Introduction

In present era, Artificial Intelligence and smart AI devices have become important part of our lives, it has become crucial for parents to get adapted to informed and balanced approach to digital parenting. This work highlights the requirements for complete digital literacy programs and policies for supporting parents in the management of the digital engagement of children. By developing a collaborative effort among parents, educators and policymakers, system can connect with the advantages of technology and mitigate the potential risks. Integrating artificial intelligence and smart AI device into household is offering opportunities as well as challenges in parenting. While such technologies can improve learning and development of children, they also require better awareness and involvement of parents. By addressing conflicts that arise from digital usage and bridge the digital divide are important steps that ensures that Artificial intelligence and smart devices make positive impact on the family (Agomoh, Clara & Ifeoma, 2024). It is indicated that Artificial Intelligence is not just a tool of entertainment, it has become integrated into routines of family. It is revealed that digital communication provides multi-sensory experience supporting development of language, mainly when parents guide them. However, the efficacy is dependent highly on meditation of parents. Their Artificial intelligence literacy appears as a main variable that make direct impact on the efficacy of such meditation strategies. It is also emphasised that a knowledge gap among parents with regards to principles of Artificial Intelligence that constrains the usage of smart technologies as

participatory tools of education. It is proposed by the study that a digital parenting framework based on artificial intelligence integrating the theory of parental-mediation with AI literacy for technology-mediated early childhood care. Practically, it is recommended to strengthen the AI-literacy programs for parents, development of active-mediation guidelines within early settings of childhood and innovating technologies that are child-focused and develop dialogue and family involvement. Therefore, in this AI era, digital parenting should move beyond restrictions from screen toward a process a education integrating reflection, safety and meaningful communication among family, children and technology (Mukhtar et al. 2025). Integrating AI into parenting practices has attained substantial attention, but the understanding is limited about how demographic factors make influence on the perception and engagement of AI-assisted parenting. The purpose of the study is addressing the gap by analysing the demographic profile of individual involve in parenting practices that are AI assisted and explore their perceptions of this new trend. It is suggested that integration of AI-assisted parenting practices with educational program promoting the inclusive adoption of AI technologies. It is emphasised by the findings that there are requirements for user-friendly and culturally sensitive AI tools, it ensures broader acceptance and using AI-assisted parenting practices (Jabali & Ayyoub, 2024).

It is found that majority of parents are not fully aware about how their children are using GenAI, believing that it is mostly for searching information and school work, and not for personal use. It is revealed that there are a disconnection and lacking communication. Parents feel that adolescents are using GenAI is making negative impact on their cognitive skills like critical thinking, creativity, social skills, privacy as well as academic performance. It is further indicated that perspective of parents is substantially influenced by their own familiarity with and using GenAI tools. Parents lacking opportunities for familiarising themselves with such digital tools must be provided with the support, so that they can reduce the uncertainty and also support their children. Additionally, virtual reality has also changed the business and social scenario (Yadav et al., 2023). Artificial Intelligence literacy programs informal as well as informal education settings can be beneficial for parents as well as children, it develops the responsible use of GenAI as a main element in development of empowered future society (Eira, Rasouli & Charisi, 2025). It is observed that traditional parenting is not very flexible and unbending and its focus is to raise a responsible, functional adults with good manners, proper education as well as ethics. On the other hand, modern parenting is highly flexible, and it focuses on nurturing, engaging and permitting children to express their independence. Digital technology states that parenting has become hard compared to 20 years ago as using technology and social media have changed the moral values (Wangmo, 2024).

Literature Review

Pakdemirli (2026) stated that digital technologies and Artificial Intelligence are highly influencing the parenting practices, family life, and physical and mental health of children. Application enabled by Artificial Intelligence and smart AI tools, remote monitoring systems, digital therapeutics, mobile health interventions and platforms based on algorithms for mental development and psychiatric assessment. While such technologies are offering opportunities for improving parental support, personal care and enhance access to services, it is also raising concern associated with ethics, data privacy, equity, and relationship between child and parent. It is suggested by the evidences that AI-enabled tools and technologies are effective when they are transparent, co-designed with clinicians as well as parents, and including it into present health and social care systems. However, gaps are always there with regards to long-term results, equitable access, ethical governance and sustainable application. Artificial Intelligence in digital parenting must be considered and seen as a complementary resource instead of replacement, parental judgement and professional care. When it comes to communication, integrated marketing communication works with luxury and other lifestyle products as well, which makes the orientation of families towards luxury products (Das & Mittal, 2023).

Bajwa et al. (2024) revealed that integrating Artificial Intelligence in everyday life parenting has got transformed, it deals with new challenges and harness the opportunities for improving the development of children in a positive way. Recent studies highlighted that early involvement of children with artificial intelligence, shows that children as young as 5 to 6 years are formulating their own metaphors and perspectives on Artificial intelligence, they are using it in such a way that is making substantial influence on their process of learning as well as emotional well-

being. Author discussed about how artificial intelligence is revolutionising the education system as it provides personalized learning experience and also monitors the emotional and physical state of a child. It also examines the potential drawbacks that include digital addictions, privacy concerns and risk related to technology interferences in child and parent interaction.

Amiri (2025) highlighted that pervasive impact of AI and digital tools and technologies in the lives of children is demanding a balanced approach to parenting in this digital era. Author examined how to raise the child who are technically skilled while maintain their cognitive, emotional and social well-being. With a complete review, he explored the dual influence of artificial intelligence tools on education and development, he also highlighted benefits like enhanced problem-solving skills, personalized learning and related risks like excessive screen time, privacy related concerns and lessened face-to-face communication. The importance of developing digital literacy is emphasised alongside offline activities ensuring the complete development of child.

Deckker & Sumanasekara (2025) emphasised that AI has been integrated into early childhood education system through adaptive learning platforms, AI-enabled toys and conversational agents. Technology firms along with the government are promoting these tools and toys for personalized learning and to reduce the workload of teachers, the perspective of parents is still unexplored, despite the role of parents being primary gatekeeper for digital experience of young children. Parents are not found to be consistently passionate not even completely resilient, their evaluation is dependent on transparency of AI system, the level to which such tools match with the norms of local pedagogy and their capability of interpreting the risks and benefits critically. The proposed three-pillar framework simplifies how such dimensions interact and offers detailed lens compared to past studies that treated parental concerns as uneven or secondary.

Widyaatmadja & Solechan (2024) revealed that implementing digital parenting in present digital and AI era needs extra efforts. In terms of application of digital parenting, it is not just parents need to understand things about advanced information technology. However, on the other hand, parents must also serve as a good example to operate digital device. In this AI era, big challenges are faced by parents while parenting their children, as it is well-known that users of digital media do not bat an eye age from children to adults. Majority of parents in this AI era are finding it difficult to raise their children. Using digital technology, on one hand, like video games, and internet in the family is unavoidable. On the other hand, parents can experience negative influence of digital technologies. Parents must keep their children knowledge updated regarding latest technologies and how it can make impact on their lives. It is possible that children might not have complete knowledge and awareness about how to set boundaries and privacy on social media platforms and application, so it is the responsibility of parents to assist them to understand about privacy settings and its impact.

Njiru & Odundo (2024) stated that many opportunities are presented in this digital era for parenting like to have access of unlimited amount of information over the internet, accessing information regarding relatives over the internet and social media and getting connected with the children when at work. Some other opportunities that were developed during digital parenting of children include accessing knowledge through search engines like Google and rising creativity among children. Challenges related to digital age parenting like increased screen time, addiction, anti-social behavior, reduction in physical activities, cyber bullying among children. Therefore, digital age is related with challenges for which parents must seek to reduce for children to make them have full benefit of opportunities. Challenges related with digital age exerted the greatest positive and substantial effect on parenting of their child followed by the opportunities that are presented in this digital era.

Farisal (2025) studied that Artificial Intelligence is changing the way parents are guiding and educating their children. Artificial Intelligence has made today's children independent in learning, and it has reduced the dependency on their parents. It has been observed that many children these days are trusting the AI more compared to their parents, and parental control based on AI is enforcing the discipline in a more objective manner. Artificial Intelligence is helping the parents to discipline their children by analysing their behavior and suggesting strategies, and it is also weakening the authority of parents. Children who are tech-savvy are found to be trusting AI more than their parents, which is eventually reducing the parental influence. It is well-known that AI brings benefits as well as challenges to parenting. One of the main challenges is shift in the pattern of discipline. Addressing

inequalities in AI parenting, it is emphasised by global organizations to look at the importance of digital literacy, affordability and gender inclusion. Government along with the educational institutes must provide training on artificial intelligence to parents, mainly in the underserved communities ensuring responsible use of AI and create more awareness of its influence on the dynamics of the family. They should also ensure that AI is affordable and relevant culturally. Policies must make the technology of artificial intelligence accessible to every level of people.

Objective

1. To know the factors impacting “Digital Parenting in the AI Era through Smart AI devices”
2. To measure the impact of Smart AI devices on digital parenting in the era of AI.

Methodology

339 participants were surveyed from participants residing in different region. The method of sampling was “Random sampling” for collection of data and examination was done by “Explanatory Factor Analysis” for results.

Findings

Table 1 demonstrates demographic details, it shows that 52.21% are Male, 47.79% are female. Looking at the age, 33.63% are below 30 years of age, 38.05% are between 30 to 35 years of age, and 28.32% are above 35 years of age. With regards to Area of Residence, 32.15% are from Urban region, 34.51% are from semi-urban region and 33.34% are from rural region.

Table. 1 Respondent’s Details

Variables	Participants	Percentage
Gender		
Male	177	52.21%
Female	162	47.79%
Total	339	100
Ages in years		
Below 30	114	33.63%
30 to 35	129	38.05%
Above 35	96	28.32%
Total	339	100
Area of Residence		
Urban	109	32.15%
Semi-urban	117	34.51%
Rural	113	33.34%
Total	339	100

Table 2 “Kaiser-Meyer-Olkin Measure of Sampling Adequacy”

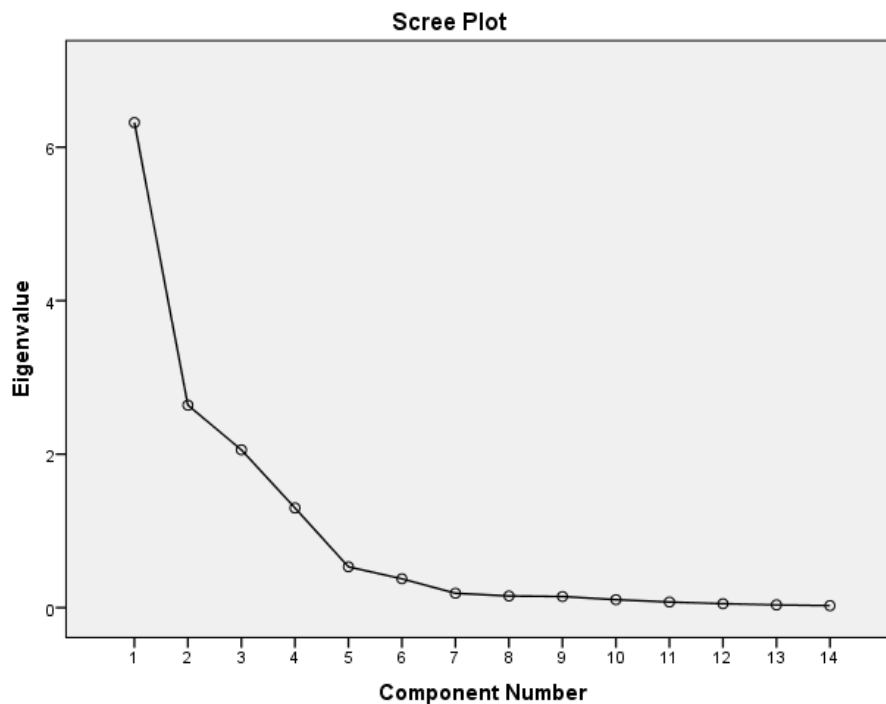
“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.766
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	6018.673
	df	91
	Significance	.000

“KMO and Bartlett's Test”, value of KMO is .766 (Table 2).

Table 3 “Total Variance Explained”

“Component”	“Initial Eigenvalues”			“Rotation Sums of Squared Loadings”		
	“Total”	“% Of Variance”	“Cumulative %”	“Total”	“% Of Variance”	“Cumulative %”
1.	6.321	45.148	45.148	3.831	27.365	27.365
2.	2.638	18.846	63.994	3.631	25.936	53.301
3.	2.056	14.688	78.682	2.485	17.750	71.051
4.	1.300	9.283	87.964	2.368	16.914	87.964
5.	.533	3.805	91.769			
6.	.376	2.687	94.457			
7.	.187	1.338	95.795			
8.	.152	1.089	96.883			
9.	.145	1.036	97.920			
10.	.105	.747	98.666			
11.	.073	.522	99.188			
12.	.051	.368	99.556			
13.	.036	.254	99.810			
14.	.027	.190	100.000			

The four factors contribute towards explaining total 87.964% of variance. Variance explained by AI-based Parental monitoring is 27.365%, Digital Literacy of Parents is 25.936%, Parent & Child digital communication is 17.750%, and AI-assisted learning and education benefits is 16.914%. (Table 3).



“Scree Plot”

Table. 4 “Rotated Component Matrix”

S. No.	Statements	Factor Loading	Factor Reliability
	AI-based Parental monitoring		.951
1.	AI-enabled devices help in monitoring child’s online activities	.953	
2.	Smart AI tools provide timely alerts about potential harmful effects	.905	
3.	AI-based monitoring improves awareness about child’s digital behavior	.855	
4.	AI-powered parental control help in identifying excessive screen usage	.845	
	Digital Literacy of Parents		.962
1.	Parents must understand the basic functioning of AI-powered devices used by children	.961	
2.	It makes parents confident in managing parental control settings on smart devices	.906	

3.	It helps in updating knowledge about emerging digital technologies	.900	
4.	Digital literacy makes them aware about risks related to AI-driven digital platforms	.875	
	Parent & Child digital communication		.879
1.	It makes parents discuss about responsible use of technology with child	.920	
2.	Children feel comfortable discussion online experience with parents	.856	
3.	Open communication helps prevent digital misuse	.778	
	AI-assisted learning and education benefits		.847
1.	Smart learning applications help children improve academic performance	.932	
2.	AI technologies provide personalized learning opportunities to children	.931	
3.	AI enabled learning tools increase engagement of child in studies	.673	

Factors of the study and its related variables

AI-based Parental monitoring is the first factor of the study, it includes variables like AI-enabled devices help in monitoring child's online activities, Smart AI tools provide timely alerts about potential harmful effects, AI-based monitoring improves awareness about child's digital behavior and AI-powered parental control help in identifying excessive screen usage. Digital Literacy of Parents is the second factor, the variables it includes are Parents must understand the basic functioning of AI-powered devices used by children, It makes parents confident in managing parental control settings on smart devices, It helps in updating knowledge about emerging digital technologies and Digital literacy makes them aware about risks related to AI-driven digital platforms. Third factor is Parent & Child digital communication, its variables are It makes parents discuss about responsible use of technology with child, Children feel comfortable discussion online experience with parents and Open communication helps prevent digital misuse. Last and fourth factor is AI-assisted learning and education benefits; variables it includes are Smart learning applications help children improve academic performance, AI technologies provide personalized learning opportunities to children and AI enabled learning tools increase engagement of child in studies.

Table 5 "Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.895	14

Total reliability of 14 items that includes variables for "Digital Parenting in the AI Era through Smart AI devices" 0.895 (Table 5).

“Table 6 Model Summary”

“Model”	“R”	“R Square”	“Adjusted R Square”	“Std. Error of the Estimate”
1	.863 ^a	.745	.742	.39663
Predictors: (Constant), AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication, and AI-assisted learning and education benefits				

The adjusted R-squared value is 0.742 with approximately 74% of the variation.

“Table 7 ANOVA”

“Model”		“Sum of Squares”	“df”	“Mean Square”	“F”	“Sig.”
1	“Regression”	153.604	4	38.401	244.104	.000 ^b
	Residual	52.543	334	.157		
	Total	206.147	338			
a. Dependent Variable: Overall impact of Smart AI devices on digital parenting						
b. Predictors: (Constant), AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication, and AI-assisted learning and education benefits						

Value under significant column indicates a significant relationship between Smart AI devices (AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication, and AI-assisted learning and education benefits) and Digital Parenting.

“Table 8 Coefficients”

“Model”	“Un standardized Coefficients”		“Standardized Coefficients”	“t”	“Sig.”
	“B”	“Std. Error”	“Beta”		
(Constant)	3.950	.022		183.356	.000
AI-based Parental monitoring	.323	.022	.413	14.968	.000
Digital Literacy of Parents	.059	.022	.076	2.736	.007
Parent & Child digital communication	.265	.022	.340	12.306	.000
AI-assisted learning and education benefits	.526	.022	.673	24.361	.000
DV: Overall impact of Smart AI devices on digital parenting					

All the factors AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication, and AI-assisted learning and education benefits are showing significant impact of Smart AI devices on digital parenting. Highest impact is shown by AI-assisted learning and education benefits (.673), AI-based Parental monitoring (.413), Parent & Child digital communication (.340), and Digital Literacy of Parents (.076).

Conclusion

The emergence of Artificial Intelligence and smart AI devices have significantly reshaped children’s digital experiences, creating both opportunities as well as challenges for parents. While AI-powered technologies

enhancing learning, creativity, communication and access to information, they also expose children to risks such as excessive screen time, privacy concerns, cyber threats, misinformation, and inappropriate content. As a result, digital parenting has become an essential responsibility in ensuring that children benefit from technology while remaining protected from its potential harm. The study concludes that effective digital parenting in the AI era requires a balanced approach that combines parental supervision, open communication, digital literacy, and responsible use of AI-enabled monitoring tools. Parents who actively engage with their children's online activities establish clear technology-use guidelines, and educate them about digital citizenship are better positioned to promote healthy and safe technology habits. The factor influencing Digital Parenting in the AI Era are AI-based Parental monitoring, Digital Literacy of Parents, Parent & Child digital communication and AI-assisted learning and education benefits.

References:

- [1] Agomoh, J.M., Clara, A.O. & Ifeoma, E.L. (2024). Parenting in the Age of Artificial Intelligence and Smart Devices Usage in Nigeria, *International Journal of Strategic Research in Education, Technology and Humanities*, 12(2), 207-218.
- [2] Amiri, S.M.H. (2025). Raising Tech-Savvy but Balanced Kids in the AI Era, *SocioEdu Sociological Education*, 6(2), 118-131.
- [3] Bajwa, R.S., Yunus, A., Saeed, H. & Zulfqar, A. (2024). Parenting in the Age of Artificial Intelligence, DOI: [10.4018/979-8-3693-3350-1.ch003](https://doi.org/10.4018/979-8-3693-3350-1.ch003), 44-66.
- [4] Das, J. S., Mittal, A. (2023). Communication and its Impact on the Consumer Buying Motivations for Luxury Goods: An Empirical Study in The Indian Context, *Journal of Content Community and Communication*, 9(18), 171-189, DOI: [10.31620/JCCC.09.23/14](https://doi.org/10.31620/JCCC.09.23/14)
- [5] Deckker, D. & Sumanasekara, S. (2025). Parental attitudes toward ai in early childhood: A three-pillar framework, *World Journal of Advanced Research and Reviews*, 27(02), 444-453.
- [6] Eira, M., Rasouli, A. & Charisi, V. (2025). Parents' Perceptions About the Use of Generative AI Systems by Adolescents, *Interaction Design and Children (IDC '25)*, <https://doi.org/10.1145/3713043.3731508>.
- [7] Farisal, U. (2025). The Impact of AI on Family Communication: A Narrative Review on Children's Respect for Parents in Developing Southeast Asia, *Jurnal Parenting dan Anak*, 2(2), 1-15.
- [8] Jabali, O. & Ayyoub, A. (2024). Smart parenting: Effortless routine engagement with AI support: A quantitative study, *Education and Information Technologies*, <https://doi.org/10.1007/s10639-024-12854-1>.
- [9] Mukhtar, Z., Selvi, I.D., Mukhtar, N. & Jasandra, A. (2025). Digital Parenting in the Era of Artificial Intelligence: The Role of Parents in Guiding Early Childhood Interaction with Smart Technology, *Journal of Early Childhood Education*, 5(2), 260-270.
- [10] Njiru, J.I. & Odundo, P. (2024). Digital Parenting: Navigating The Challenges of Raising Children in the Digital Age in Nairobi, Kenya, *International Academic Journal of Social Sciences and Education*, 2(3), 284-301.
- [11] Pakdemirli, A. (2026). Artificial Intelligence and Digital Technologies in Family and Parenting Contexts, *Journal of Basic and Clinical Health Sciences*, 10(1), 149-156.
- [12] Wangmo, T. (2024). Parenting in the Digital Era: Emotional Intelligence and Family Dynamics, *International Journal of Creative Research Thoughts*, 12(12), 597-607.
- [13] Widyaatmadja, S.T. & Solechan, A. (2024). Digital Parenting: Challenges and Roles of Parents in the Era of Society 5.0, *International Journal of Health and Medicine*, 1(3), 165-183.
- [14] Yadav, M., Khurana, R., Vihari, N. S., Mittal, A., Balodi, A., & Srivastava, A. P. (2023). Virtual Reality in Human Resource Management: Past, Present and Future Trends. <https://doi.org/10.1109/icrasets59632.2023.10420290>, 2023 International Conference on Recent Advances in Science and Engineering Technology (ICRASET), B G NAGARA, India, 2023, pp. 1-5, doi: [10.1109/ICRASET59632.2023.10420290](https://doi.org/10.1109/ICRASET59632.2023.10420290).