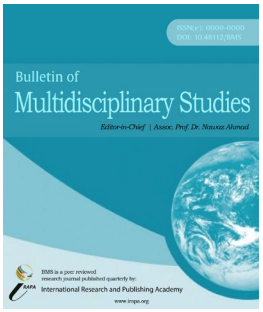
02-26-BMS-5954-1109

Bulletin of
Multidisciplinary Studies
Vol. 2 No. 3 | July – September, 2025 | 249-258
ISSN(e): 3007-0619 | ISSN(p): 3007-0600
DOI: https://doi.org/10.5281/zenodo.16937880



Original Article

Exploring the Digital World: Risks, Rights, and Opportunities for Children in Pakistan

Article history:

Received: July 21, 2025
Revised: August 23, 2025
Accepted: August 26, 2025
Published: Oct 01, 2025

Erum Hafeez (Ph.D) *(Corresponding Author)*
Department of Media Science
Iqra University, Karachi, Pakistan
https://orcid.org/0000-0002-6954-3092
hafeezerum144@gmail.com

Humayl Aslam
Department of Science
The University of Hong Kong, Pokfulam, Hong Kong
humaylaslam@connect.hku.hk

Muhammad Umer Ahrar
Department of Business Administration
Iqra University, Karachi, Pakistan
https://orcid.org/0009-0008-9879-0691
umerahrar@iqra.edu.pk

Authors' Biography

Erum Hafeez (Ph.D) is a Professor at the Department of Media Science, Iqra University in Karachi, Pakistan. She obtained her Doctorate in Mass Communication from Karachi University in Karachi, Pakistan.

Humayl Aslam is currently working at the Department of Science, The University of Hong Kong in Pokfulam, Hong Kong. He completed his Bachelors of Mathematics, Physics from The University of Hong Kong in Pokfulam, Hong Kong.

Muhammad Umer Ahrar is a Lecturer at the Department of Business Administration, Iqra University in Karachi, Pakistan. He completed his Master of Business Administration from Iqra University in Karachi, Pakistan.

JEL Classification: **L86**

How to Cite:

Hafeez, E., Aslam, H., & Ahrar, M. U. (2025). Exploring the Digital World: Risks, Rights, and Opportunities for Children in Pakistan. *Bulletin of Multidisciplinary Studies, 2*(3), 249–258.
https://doi.org/10.5281/zenodo.16937880

Publisher's Note:

International Research and Publishing Academy (*i*RAPA) stands neutral with regard to jurisdictional claims in the published maps and institutional affiliations.

Copyright:

© 2025 | Bulletin of Multidisciplinary Studies published by International Research and Publishing Academy (*i*RAPA)

This is an Open Access article published under the Creative Commons Attribution 4.0 International (CC BY 4.0) (https://creativecommons.org/licenses/by/4.0)

Creative Commons Attribution (CC BY): lets others distribute and copy the article, to create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), to include in a collective work (such as an anthology), to text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honour or reputation.

ABSTRACT

Digital media is transforming interpersonal relations and choices worldwide, including among children. While the internet offers valuable opportunities for learning and networking, it also exposes young netizens to significant risks, affecting their cognitive and emotional well-being. As internet usage among Pakistani children increases, it becomes crucial to optimize its benefits while mitigating associated threats. This study, grounded in the Early Childhood Development and Uses and Gratification Theories, examines the interplay of online opportunities and risks among children in Pakistan. Using a structured questionnaire, adapted from Livingstone (2016) and Global Kids Online (2020), data were collected from 401 children aged 9–17 across the country to assess their online experiences. Findings indicate three key insights: (1) the internet plays an important role in supporting children's education and socialization; (2) children often encounter online threats, including cyberbullying, privacy breaches, and harmful content; (3) poor digital literacy and inadequate parental guidance increase vulnerability to these risks. The study highlights the urgent need for targeted interventions by parents, educators, and policymakers. Enhancing digital literacy and integrating children's perspectives into national strategies are essential steps toward fostering a safer, more empowering digital environment for young users in Pakistan.

Keywords: *Cyber Bullying; Digital Literacy, Online Risks; Emotional Well-being, Children's Rights; Pakistan*

INTRODUCTION

Digital media, encompassing digitized content such as software, videos, images, web pages, databases, audio, and e-books, has become an integral part of everyday life (Das, 2020). Among different demographic groups, children and teenagers are often described as "digital natives" due to their deep engagement with online platforms (Livingstone et al., 2016). In Pakistan, the population reached 255.2 million in early 2025 (World Population Review, 2025) with approximately 19% aged 5-12 and 11% aged 13-17. The country's internet penetration rate stood at 45.7%, with 116 million users (Kemp, 2025). These statistics highlight the increasing digital engagement among children, posing pertinent questions about the nature and consequences of their online interactions. Digital media plays a crucial role in children's education, social interactions, and personal development.

Online platforms provide valuable learning opportunities and avenues for self-expression, yet they also present several challenges such as excessive screen time, cyber risks, and exposure to harmful content (Hafeez, 2023). This study explores the extent of internet access among Pakistani children, their patterns of digital engagement, and how these experiences influence their academic and personal growth. Additionally, it investigates the potential risks associated with their online activities. Given the dearth of empirical research on children's digital behaviours in Pakistan, this study seeks to bridge the gap by offering a comprehensive analysis of their online experiences and the challenges they encounter in an increasingly digital world.

The current study revolves around a child-centred approach, grounded in early Childhood Theory which highlights the importance of customized knowledge construction, keeping in mind children's demography (including age, gender, ethnicity) personalized interests, developmental needs, and capabilities. In the context of the current research, the child-centred theory advocates children's choices of online activities, considering caregivers as facilitators only, responsible for providing conducive environment for children to be in control of their own online activities. Besides applying Uses and Gratification Theory, this study tried to comprehend the core reasons behind diverse uses of internet by children. The theory believes that media consumers including children are active rather than passive users and utilized it consciously for various functions including surveillance, correlation, entertainment and cultural exchange.

Applying the child-centred approach in combination with the Uses and Gratification Theory, this research study upholds the children's perspectives, thus surveyed their viewpoint about the internet usage and its effects on the various aspects of their lives, including learning and skill development, civic and creative participation, social and personal relationship, recreational and entertainment activities and understanding of protective measures. This study holds particular significance in the Pakistani context by empirically examining children's digital media use and addressing a critical gap in local literature. It offers a balanced analysis of the educational and developmental opportunities alongside the cyber risks and digital overexposure that children face. Grounded in a child-centred framework and the Uses and Gratifications Theory, the findings aim to inform digital policy and parental strategies, contributing to safer

and more meaningful online experiences for children nationwide.

Research Objectives

The research seeks to understand both the opportunities and the risks associated with children's internet use. From this perspective, the opportunities relate to their educational engagement, civic participation, creative expression, and, socialization and networking. The risks, on the other hand, relate to their privacy violations, digital safety, and overuse of internet.

LITERATURE REVIEW

The literature about digital media and children suggests both excessive opportunities as well as significant challenges. Pertaining to the first variable of the study i.e. digital engagement and its contribution to children's early learning and skill development, most former studies established that digital literacy, as early as 0 to 8 years begins at home, whereas the home environment shapes children's initial interactions with technology (Marsh et al., 2017; Plowman et al., 2010). Eickelmann et al. (2024) further reinforced that family values and parental mediation considerably influence children's digital learning outcomes and overall well-being. Katz et al. (2017) mentioned that the children, families, and technology interact in the home, which contribute towards their understanding of the world and learning inclinations in later life, leading to an increased concern that young children's lack technical, critical and social skills may pose a risk (Livingstone et al., 2011).

Hence, Page Jeffery (2024) emphasized a democratic approach to digital parenting, based on parental listening, negotiation, and mutual understanding for better interventions, because parents do not ask their children about their online activities, nor actively "listening" to their children to understand their practices and perspectives (Livingstone & Blum-Ross, 2020). Chronologically, the second and third variables under study are civic participation, socialization and networking activities influenced by digital media engagement among children. Several earlier studies highlight the positive effects of diverse digital media, especially social media platforms which enable children and teenagers to connect with family and friends over long distances (Ito et al., 2009), one identifies topics of shared interests for offline communication (Reich et al., 2012), one suggests using digital media to make new friends (Lenhart et al., 2015), one highlights collaboration on projects through online communities (Boyd, 2013), and one opens an access to health information and support groups with similar conditions (Lenhart et al., 2010).

Creative Expression is another variable investigated regarding children's digital activities. As Burns and Gottschalk (2019) aptly indicated, in the future 65% of children will have jobs and professions that haven't yet been invented. Consequently, the use of the internet will be a robust enabler of the realization of many sustainable development goals that directly impact on children's well-being in coming years. Online risks, privacy issues and bullying are the negative variables investigated in the digital environment. Several former researches, like this study, focused on the detrimental influence of digital media on the mental, emotional, and physical health of children. Obesity, insomnia, eyesight problems, aggressive behaviour, and poor social skills are identified as core negative effects of excessive online media usage. Besides, exposure to violence, sexting, pornography, drugs, and possible connections to cult groups and paedophiles, which often lead to stalking, cyber harassment, cyber bullying and privacy issues, are also underlined as potential online threats to young internet users (Rosen, 2011; Bozzola et al., 2022; Mitchell et al., 2007).

Contrary verdicts have also emerged. Jackson et al. (2003) mentioned negligible social impact of internet use among children from low-income families. Sanders et al. (2000) highlighted better relationships of low internet users with mothers and friends compared to the heavy users. Data from some African countries indicate that boys compared to girls are at a greater risk of abuse, including statutory offense, exposure to sexual images, and sexual violence, both online and offline (Artz et al., 2016). Moreover, children tend to be more bothered by violent images, or text promoting hate speech than by images of a sexual nature. These diverse perspectives, accentuate the complex role of digital media, which concurrently offers benefits for educational and social development rooted in Uses & Gratification & Early Childhood Theories, while exposing children to latent threats, such as cyberbullying, access to harmful content, and privacy violations (Bozzola et al., 2022).

The COVID-19 pandemic in 2020 further enhanced children's dependence on digital media, as school closures demanded a shift to hybrid educational models (Steven, 2016). This period has featured the dual nature of digital media: while it eases continuous learning and social interaction, it also amplifies children's vulnerability to online risks and threats. The existing literature underscores a serious dearth of

empirical research in Pakistan about how influential are the digital and social media platforms on children. A survey study conducted in Gujrat (Pakistan) indicated that children spend more time on internet than popular media. They use it mostly for educational purpose and playing games and in the process are also socialized. It is significant that the internet helps a lot in social development and personality building of the children (Yousaf et al., 2014). Abbas et al. (2018) surveyed the effects of excessive internet usage on the youth's lives. Around 55.6% of their respondents, mostly university students in Karachi, aged between 18 and 25 years, confirmed that they were addicted to the internet, spent most of their time online, and it had changed their living patterns, adversely affected their work routine and socialization time with family and friends.

Chhachhar et al. (2014) highlighted that most children in countries like Pakistan may use the Internet without being guided and supervised by their parents and teachers. This makes them susceptible to the negative effects of the Internet. Thus, their study emphasized parental guidance and involvement in monitoring their child's online activities to ensure a safer use of the Internet. Kasi et al. (2023) investigated the internet usage by children from Baluchistan province (Pakistan). Their results revealed that most of the children spent most of their online time in social media applications and online gaming despite adults' concerns about its adverse impact on their physical, social, and mental well-being. Considering the lack of empirical studies, we investigate the online presence and activities of Pakistani children to identify the level of digital media consumption and the associated harms and dangerous with such media platforms.

Theoretical Framework

The current study adopted a child-centred approach upholding that children's online experiences are shaped by their identities. These identities, simultaneously, are shaped by social, cultural, and psychological factors. Grounded in early childhood theory, the child-centred approach emphasizes the children's right to knowledge based on their interests, developmental needs, and capabilities. It also gives children the opportunity to explore, investigate, reason, and be creative as they acquire it (Cade, 2023; Leggett, 2017; Salmon, 2008). Within this framework, digital media environments should be designed to empower children as active participants, while caregivers facilitating rather than controlling their online activities.

Furthermore, the study employs the Uses and Gratifications Theory (UGT) to examine why children use digital media and what they seek from their online experiences. UGT suggests that media consumers are active participants who consume digital platforms for networking, information-gathering, and entertainment (Park et al., 2009). Digital media serve as means for retaining offline connections, strengthening community, and shaping individual identity (Ellison et al., 2007; LaRose & Eastin, 2004). By assimilating these diverse theoretical perspectives, this study offers a holistic understanding of children's internet usage in Pakistan, investigating its effects on learning, personal development, socialization, and digital safety. It also underlines the need of engaging children in digital policy deliberations to ensure their online activities are both inspiring as well as safe.

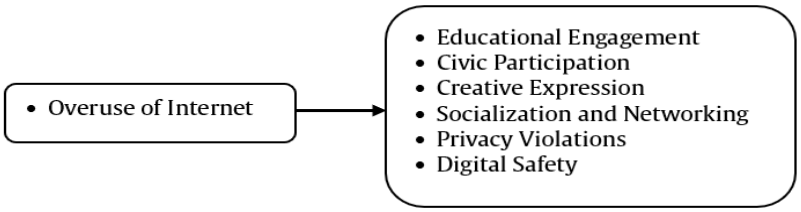


Fig. 1. The Framework

Hypotheses

- The Overuse of Internet impacts the Educational Engagement of children
- The Overuse of Internet impacts the Civic Participation of children
- The Overuse of Internet impacts the Creative Expression of children
- The Overuse of Internet impacts the Socialization and Networking of children
- The Overuse of Internet impacts the Privacy Violations of children
- The Overuse of Internet impacts the Digital Safety of children

METHODOLOGY

Considering the empirical nature of the research,

the current study adopted a quantitative approach to investigate about the digital media usage among Pakistani children. The prime sample consisted of children aged 9–17 years. The participants aged between 9 and 17 years were labelled to be 'children' as declared by UNICEF (Livingstone et al., 2016). Children who used digital devices and the internet and had used the internet at least once in three months before the study were included in the study. The sample size for this study was generated considering the availability of children and parents with required online exposure. A probability sampling approach was used to collect the data about the Pakistani community with appropriate reliability, sampling errors, and confidence intervals. Probability sampling is a technique in which every unit in the population has a chance (non-zero probability) of being selected in the sample and the sampling procedure involves random selection at some point (Bhattacherjee, 2012).

Data Collection

The current study followed the model and toolkits (questionnaire for survey) of the Global Kids Online Project (2020). It was meticulously designed and tested by Livingstone et al., (2016) and other researchers (Byrne et al., 2016). For this study, it was slightly modified following pilot research to ensure its relevance to the issue under study in local context. The questionnaire evaluated the frequency and form of digital activities alongside the perceived opportunities and threats connected with online engagement. These surveys were conducted in selected schools, coaching centres as well as online through a well-defined questionnaire to ensure extensive reach. Respondents were provided an access to the questionnaire via an internet web browser and completed it without the surveyor's involvement. Audio recordings or visual guidelines were incorporated to guide and retain the young respondents.

Data Analysis

Quantitative data were analysed carefully, adopting diverse statistical measures to investigate the impact of digital media usage on children's learning, socialization, and overall well-being.

Ethical Considerations

The study followed all ethical considerations carefully. Written consent was attained from all participants and their guardians, ensuring compliance to ethical values related to individuals' privacy and the protection of their identities throughout the research process. By establishing the data collection and analysis in recognized theoretical frameworks—namely, Uses and Gratifications Theory (Ruggiero, 2000)—the research provides a comprehensive insight of digital media's role in the lives of Pakistani children. The methodological rigor further enhances the reliability of the findings.

RESULTS & FINDINGS

Demographic Profile

A total of 401 responses were collected via a modified questionnaire, adopted from the Global Kids Online Project (2020). Table 1 shows the demographic profile of the sample under study. The sample exhibited a male-to-female ratio of approximately 3:1. Regarding socioeconomic status, participants were asked to characterize their background. Analysis of these responses indicated that the average reported socioeconomic background was middle class. Data collection also included information on internet usage patterns. Participants were queried regarding their typical internet usage duration and the study found that the children who never used the internet were significantly more (158n, 39.4%) than that of the children who use it.

Table 1

Demographic Characteristics of the Sample

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	294	73.3
	Female	102	25.4
	Other	5	1.2
Socioeconomic Status	Upper	60	15
	Middle	237	59.1
	Lower	104	25.9

Internet Usage Duration	Never	158	39.4
	Just Once or Twice in a Month	27	6.7
	Every Month	5	1.2
	Every Week	92	22.9
	Daily	81	20.2
	Almost all the time	38	9.5
	Total	401	100.0

Analysis of Key Variables

To ensure relevance and facilitate efficient analysis, we strategically selected 19 questions from an original 106-question questionnaire. These questions were categorized into eight thematic areas including Educational Engagement (EE), Civic Participation (CP), Creative Expression (CE), Socialization and Networking (SN), Privacy Violations (PV), Digital Safety (DS), and Overuse of Internet (OI). Table 2 displays the descriptive statistics (in terms of central tendency and dispersion) of the received response against each variable. The mean score of Educational Engagement of the participants was 3.125 (52.08%) with Std. Deviation = 0.864 and Variance = 0.747. Children reported moderate engagement in digital learning. Despite growing access, digital learning remains underutilized due to limited structured online educational ecosystems in public schooling. The mean score of Civic Participation of the participants was 2.434 (40.56%) with Std. Deviation = 0.998 and Variance = 0.996. Engagement in online civic activities (e.g., discussing socio-political issues, reading news, joining groups, participating in an online protest, campaign or signed a petition) diversified. Responses showed stark variations in terms of involvement.

Children's Civic awareness online is emerging, though informal. Schools and digital campaigns can play a larger role in promoting responsible participation. The mean score of Civic Expression of the participants was 2.900 (48.33%) with Std. Deviation = 1.353 and Variance = 1.829. Most of the respondents reported never engaging in creative activities on digital media (e.g., creating or uploading videos or music), while some did it so once or twice per month. Daily creative activity was relatively low. Limited platforms and exposure may restrict creative expression, calling for safe, supervised opportunities to boost digital creativity. The mean score of Socialization and Networking of the participants was 2.824 (47.06%) with Std. Deviation = 1.068 and Variance = 1.141. Online entertainment activities exhibit diverse engagement patterns within the sample. Children frequently used the internet for entertainment, watching videos or playing games daily, and listening to music several times per day. The mean score of Socialization and Networking of the participants was 2.824 (47.06%) with Std. Deviation = 1.068 and Variance = 1.141.

The mean score of Overuse of Internet by the participants was 1.508 (25.13%) with Std. Deviation = 0.266 and Variance = 0.071. Online entertainment activities exhibit diverse engagement patterns within the sample. Children frequently used the internet for entertainment, watching videos or playing games daily, and listening to music several times per day. The mean score of Digital Safety to be taken by the participants was 3.359 (55.98%) with Std. Deviation = 1.084 and Variance = 1.176. Many children found limited engaged with common privacy-enhancing strategies, such as modifying settings to restrict profile visibility beyond default options, utilizing child-friendly search engines, employing robust password practices, or periodically deleting browsing history. The mean score of Privacy Violations to be cared of by the participants was 2.941(49.01%) with Std. Deviation = 0.938 and Variance = 0.880. These findings support the increased prevalence of online victimization. Data indicated that the most frequent strategies reported after such experiences by participants included disengaging from the platform by ceasing the application's use. Furthermore, the Skewness and Kurtosis were measured to test the distribution of the data and found a normal distribution. The alpha values of the Cronbach's Alpha test show the internal consistency between the items used for each of the variables.

Table 2
Descriptive Statistics of the Responses

	EE	CP	CE	SN	PV	DS	OI
N	401	401	401	401	401	401	401
Mean	3.125	2.434	2.900	2.824	1.508	3.359	2.941
Percentage	52.08	40.56	48.33	47.06	25.13	55.98	49.01
Std. Deviation	0.864	0.998	1.353	1.068	0.266	1.084	0.938
Variance	0.747	0.996	1.829	1.141	0.071	1.176	0.880

Skewness	-0.167	0.801	0.403	0.578	-0.236	0.444	0.295
Kurtosis	-0.835	0.662	-0.742	0.170	-0.218	-0.484	0.630
Cronbach's Alpha	0.886	0.864	0.918	0.854	0.857	0.619	0.804

Correlation, a statistical test, is used to measure the strength of relationship between variables. From this perspective, a positive correlation indicates that as one variable increases, the other tends to increase as well. On the other hand, a negative correlation suggests that as one variable increases, the other tends to decrease. Table 3 displays a positive and significant correlation between CP, CE, SN and EE (.296, .170, and .352), a negative and significant correlation between PV and EE (-.229), and an insignificant correlation between DS, OI, and EE. It shows a positive and significant correlation between CE, SN, DS, OI, and CP (.318, .580, .259, and .147) and a negative and significant correlation between PV and CP (-.194). It shows a positive and significant correlation between SN, DS, OI, and CE (.196, .187, and .362) and a negative and significant correlation between PV and CE (-.103). It shows a positive and significant correlation between DS, OI, and SN (.131 and .211) and a negative and significant correlation between PV and SN (-.238). It shows a negative and significant correlation between DS and PV (-.107) and an insignificant corelation between OI, PV, and DS.

Table 3

Corelation between the Variables

	EE	CP	CE	SN	PV	DS
CP	.296**	1				
CE	.170**	.318**	1			
SN	.352**	.580**	.196**	1		
PV	-.229**	-.194**	-.103*	-.238**	1	
DS	-0.005	.259**	.187**	.131**	-.107*	1
OI	0.046	.147**	.362**	.211**	-0.005	-0.014

***. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*

A One-Way MANOVA test was run to measure the impact of OI on the EE, CP, CE, SN, PV, and DS of children (Table 4). The multivariate test revealed a statistically significant impact of the internet over usage on the combined dependent variables (Wilks' Lambda = 0.425, F = 1.405, p < .00, ŋ2 = 0.133), indicating an overall influence. The univariate tests further demonstrated significant impact of OI on CP (F = 1.716, p <.00, ŋ2 = 0.156), CE (F = 2.420, p <.00, ŋ2 = 0.207) and SN (F = 1.886, p <.00, ŋ2 = 0.169). The tests, however, do not show a statistical impact of the OI on EE, PV, and DS (p= 0.122, 0.283, and 0.475).

Table 4

One-Way MANOVA

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	0.425	1.405	234	2123.213	0.000	0.133
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
EE	36.533	39	0.937	1.290	0.122	0.122
CP	62.342	39	1.599	1.716	0.006	0.156
CE	151.642	39	3.888	2.420	0.000	0.207
SN	77.289	39	1.982	1.886	0.002	0.169
PV	3.081	39	0.079	1.128	0.283	0.109
DS	45.845	39	1.176	1.000	0.475	0.097

Discussion

The findings of this study reinforce and expand upon the existing literature about children's digital engagement, particularly within the Pakistani context. Grounded in the Uses and Gratifications Theory (UGT), the evidence confirms that children actively utilize digital platforms for purposeful goals—predominantly educational, entertainment-related, and social in nature—thereby reinforcing the core UGT premise that users are active agents who seek media to satisfy specific needs (Boyd, 2013; Park et al., 2009). Furthermore, the diverse range of digital activities—extending from civic participation to creative content creation—strengthens theories concerning digital literacy and child-centred learning (Marsh et al., 2017; Plowman et al., 2010).

Consistent with the findings of the two studies, our data show that the home remains a foundational site for early digital literacy, with parental influence shaping children's initial online behaviours. However, this study moves further by highlighting a rising trend in creative and civic digital activities even among pre-teens, suggesting a shift toward more sophisticated digital roles earlier in childhood—a finding that aligns with child-centred learning theories (Salmon, 2008; Cade, 2023).

Moreover, the findings support Lasswell's media functions theory, especially in the areas of surveillance (information seeking), correlation (social interaction), and cultural transmission. Children reported accessing digital platforms not only for learning but also for forming social ties, expressing identity, and accessing culturally relevant content. This multi-functional use illustrates how digital media cater to diverse developmental needs in modern childhoods. Besides, this study adds an original contribution to regional literature by offering empirical validation of theoretical models in a low-middle-income country (LMIC) context, where digital policy and child-centred governance remain underexplored. The interplay of opportunity and risk found in the data echoes the dual-natured discourse around media effects, balancing between empowerment and vulnerability.

The practical significance of this study is multilayered, bearing direct relevance for educators, policymakers, and parents. Firstly, the dominance of digital media as a learning tool indicates an urgent need to institutionalize digital literacy programs at both school and family levels. These programs should not only enhance technical skills but also promote ethical online behaviour, information evaluation, and privacy management. Secondly, the relatively modest civic engagement and creative participation reported suggest untapped potential. This calls for school- and community-led interventions that enable children to participate in digital storytelling, collaborative projects, and youth-led social initiatives. Such programs can foster critical thinking and promote active digital citizenship from an early age (Ito et al., 2018; Reich et al., 2012).

Thirdly, the research highlights consistent exposure to digital risks, including cyberbullying, privacy breaches, and exposure to harmful content. These findings corroborate earlier international studies (Bozzola et al., 2022), but they also signal an urgent need for context-specific protective mechanisms in Pakistan. Initiatives could include parental mediation workshops, safer platform designs, and national policy frameworks that centre children's rights in digital governance (Livingstone & Blum-Ross, 2020; Page Jeffery, 2024).

The gendered differences and social disparities observed in media usage also demand nuanced, inclusive strategies that account for the diverse digital needs and vulnerabilities of boys and girls in Pakistan, reflecting findings from Artz et al. (2016) and Hafeez (2014). Finally, by adopting a child-entered approach, the study promotes listening to children's perspectives—a point often overlooked in national policy dialogues. Empowering children to participate in discussions about their digital lives can lead to more effective, empathetic, and sustainable digital future.

CONCLUSION

In short, this research highlights the crucial role of digital media simultaneously as an enabler of cognitive and interpersonal growth and a platform of potential threat for children. The results endorse that while online involvement can improve learning and strengthen civic participation, inadequate digital literacy and exposure to online risks such as cyberbullying and privacy assaults pose major threats. These insights underline the urge for a collaborative movement among educators, policymakers, and parents to devise and enforce inclusive digital literacy programs. Training children with the essential skills to navigate the digital landscape securely and efficiently must start early and be integrated with conventional learning methods.

Recommendations

Future research would benefit from incorporating qualitative or longitudinal methodologies to better understand changes in digital behaviour over time and to verify the generalizability of the findings across different cultural contexts. Forthcoming research extending this inquiry across South Asia, engaging diverse methodological approaches, will further enhance our understanding of the long-term impact of digital media usage on children.

Limitations

While the study provides valuable insights into the digital behaviours of Pakistani children, several limitations should be acknowledged. The cross-sectional design restricts the ability to draw causal inferences about the observed relationships between digital engagement, benefits, and risks. Additionally, reliance on self-reported data may introduce biases related to social desirability and recall. The modified questionnaire, though strategically reduced from its

original 106-item format, may still not fully capture the complexities of children's online interactions.

Competing Interest

The authors had no competing interests.

References

Abbas, A., Mamdani, K. F., Mahmood, S., Imran, M., Scholar, M. S., & phil Scholar, M. (2018). Impacts of internet usage on youth behaviors: A case study of university students in Karachi. In *Conference Proceeding (4th MDSRIC-273)* (Vol. 4, pp. 74-84).

Artz, L., Burton, P., Ward, C. L., Leoschut, L., Phyfer, J., Lloyd, S., & Le Mottee, C. (2016). *Optimus study South Africa: Technical report sexual victimization of children in South Africa*. UBS Optimus Foundation.

Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices*. University of South Florida.

Boyd, D. (2013). White flight in networked publics?: How race and class shaped American teen engagement with Myspace and Facebook. In *Race After the Internet* (pp. 203-222). Routledge.

Bozzola, E., Spina, G., Agostiniani, R., Barni, S., Russo, R., Scarpato, E., ... & Staiano, A. (2022). The use of social media in children and adolescents: Scoping review on the potential risks. *International Journal of Environmental Research and Public Health, 19*(16), 9960.

https://doi.org/10.3390/ijerph19169960

Burns, T., & Gottschalk, F. (2019). What do we know about children and technology? *Paris: Organisation for Economic Co-operation and Development (OECD)*.

Byrne, J., Kardefelt-Winther, D., Livingstone, S., & Stoilova, M. (2016). *Global Kids Online research toolkit: Quantitative guide*. The London School of Economics and Political Science.

http://eprints.lse.ac.uk/id/eprint/71310

Cade, J. (2023). Child-centered pedagogy: Guided play-based learning for preschool children with special needs. *Cogent Education, 10*(2), 2276476.

https://doi.org/10.1080/2331186X.2023.2276476

Chhachhar, A. R., Qureshi, B., Maher, Z. A., & Ahmed, S. (2014). Influence of internet websites on children study. *Journal of American Science, 10*(5), 40-45.

Das, A. (2020). Impact of digital media on society. *International Journal of Creative Research Thoughts, 8*(5), 2320-28820.

Eickelmann, B., Barbovschi, M., Holmarsdottir, H. B., Parsanoglou, D., Sisak, M., & Labusch, A. (2024). How does education prepare the younger generation for the digital age? Results of a qualitative study in five European countries. In H. B. Holmarsdottir & C. D. P. G. d. Alcantara (Eds.), *Understanding the everyday digital lives of children and young people*. Routledge.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook 'friends:' Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143–1168.

https://doi.org/10.1111/j.1083-6101.2007.00367.x

Hafeez, E. (2014). Cyber Harassment and Its Implications on. *Horizons, 8*(2), 29-48.

Ito, M., Horst, H. A., Bittanti, M., Herr Stephenson, B., Lange, P. G., Pascoe, C. J., & Robinson, L. (2009). *Living and learning with new media: Summary of findings from the digital youth project* (p. 128). The MIT Press.

Jackson, L. A., von Eye, A., & Biocca, F. (2003). Children and Internet Use: Social, Psychological and Academic Consequences for Low-income Children. *Psychological Science Agenda, 17*(2), 4–7.

Kasi, F., Rafique, G., & Hafeez, E. (2023). Online risks and opportunities for the children of Balochistan. *Journal of Journalism, Media Science & Creative Arts, 3*(2), 156-185.

https://doi.org/10.56596/jjmsca.v3i2.91

Katz, V. S., Gonzalez, C., & Clark, K. (2017). Digital inequality and developmental trajectories of low-income, immigrant, and minority children. *Pediatrics, 140*(Supplement_2), S132–S136.

https://doi.org/10.1542/peds.2016-1758R

Kemp, S. (2025). *Digital 2025: Pakistan*. DataReportal.

https://datareportal.com/reports/digital-2025-pakistan

LaRose, R., & Eastin, M. S. (2004). A social cognitive theory of internet uses and gratifications: Toward a new model of media attendance. *Journal of Broadcasting & Electronic Media, 48*(3), 358–377.

https://doi.org/10.1207/s15506878jobem4803_2

Leggett, N. (2017). Early childhood creativity: Challenging educators in their role to intentionally develop creative thinking in children. *Early Childhood Education Journal, 45*(6), 845-853.

https://doi.org/10.1007/s10643-016-0836-4

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media & mobile internet use among teens and young adults*. Pew Research Center.

Lenhart, A., Smith, A., Anderson, M., Duggan, M., & Perrin, A. (2015). *Teens, technology and friendships*. Pew Research Center.

Livingstone, S. M., & Blum-Ross, A. (2020). *Parenting for a digital future: How hopes and fears about technology shape children's lives*. Oxford University Press.

Livingstone, S., Carr, J., & Byrne, J. (2016). *One in three: Internet governance and children's rights.* The UNICEF Office of Research – Innocenti.

Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *EU Kids Online: Final report.* The London School of Economics and Political Science, EU Kids Online.

Marsh, J., Hannon, P., Lewis, M., & Ritchie, L. (2017). Young children's initiation into family literacy practices in the digital age. *Journal of Early Childhood Research, 15*(1), 47-60.

https://doi.org/10.1177/1476718X15582095

Mitchell, K. J., Ybarra, M., & Finkelhor, D. (2007). The relative importance of online victimization in understanding depression, delinquency, and substance use. *Child Maltreatment, 12*(4), 314-324.

https://doi.org/10.1177/1077559507305996

Page Jeffery, C. (2024). 'Trust us! We know what we are doing!'Parent-adolescent digital conflict in Australian families. *Journal of Children and Media, 18*(4), 472-488.

https://doi.org/10.1080/17482798.2024.2358947

Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior, 12*(6), 729–733.

https://doi.org/10.1089/cpb.2009.0003

Plowman, L., McPake, J., & Stephen, C. (2010). The technologization of childhood? Young children and technology in the home. *Children & Society, 24*(1), 63–74.

https://doi.org/10.1111/j.1099-0860.2008.00180.x

Reich, S. M., Subrahmanyam, K., & Espinoza, G. (2012). Friending, IMing, and hanging out face-to-face: overlap in adolescents' online and offline social networks. *Developmental psychology, 48*(2), 356–368.

https://doi.org/10.1037/a0026980

Rosen, L. D. (2011). Social networking's good and bad impacts on kids. *American Psychological Association*.

Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society, 3*(1), 3-37.

https://doi.org/10.1207/S15327825MCS0301_02

Salmon, A. K. (2008). Promoting a culture of thinking in the young child. *Early Childhood Education Journal, 35*(5), 457-461.

https://doi.org/10.1007/s10643-007-0227-y

Sanders, C. E., Field, T. M., Miguel, D., & Kaplan, M. (2000). The relationship of Internet use to depression and social isolation among adolescents. *Adolescence, 35* (138), 237.

Steven, D. (2016). *A global partnership to end violence against children.* Center on International Cooperation, New York University.

World Population Review. (2025, March 18). *Pakistan population 2025*.

https://worldpopulationreview.com/countries/pakistan

Yousaf, Z., Karim, L. N., & Arshad, S. (2014). Effects of internet on children's socialization: A survey of Gujrat. *Journal of Mass Communication Department, Dept of Mass Communication, University of Karachi, 11*.

https://doi.org/10.46568/jmcd.v11i0.2