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ENFOLD PROACTIVE HEALTH TRUST

PATHWAYS FOR HEALTHY DIGITAL ENGAGEMENT

Perspectives of Children and Adult Stakeholders from Karnataka, India

RESEARCH TEAM

Dr Vinalini Mathrani
Juhi Mathew
Vani Periodi
Arathi Rajeev

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Research Team
Dr Vinalini Mathrani, Juhi Mathew, Vani Periodi and Arathi Rajeev

A NOTE TO THE READER

This short note will help you navigate this research study easily and effectively. The report begins with an Executive Summary which provides you an overview of the study.

The report is divided into 12 main sections and has a set of 11 annexures. It has multiple footnotes that elaborate upon, and sometimes explain sections of the text. A bibliography with active hyperlinks is provided at the end.

The report is long but easy to read. If time and interest permit, do engage with it end-to-end.

If this is not possible, the following information may be of use to you.

Section 1 is the Background and Context of the study. Section 2 provides the broad aim and the detailed objectives. Section 3 on Methodology details how innovative research methods played a pivotal role in accessing new insights.

Sections 5 to 11 constitute the bulk of the report. These are rich with data, information, nuances and the voices of the study participants. Each section ends with an analytical sub-section on Key Takeaways.

Section 12 presents the Conclusions and the Recommendations. This includes practical, empathic and mindful ways for children, parents and teachers to work collaboratively to enable a healthy engagement with the digital world.

At the end of the main body of the report, a separate stand-alone section presents seven case vignettes of children who interacted with the digital world in very different ways. It establishes the richness of their engagement. These cases effectively disabuse the notion that some children's online engagement is healthy, while others have an unhealthy engagement. These vignettes underscore the belief that the potential for healthy engagement lies within all children.

Annexure 1 provides an overview of Participatory Action Research and how it was operationalised for this study. Annexure 2 contains all the data collection tools. Researchers could adapt these for understanding this phenomenon in their local contexts. Annexures 3, 4, 5, 6, 7, 8, 9 and 10 contain tables and charts substantiating the information presented in the main report. Annexure 11 provides information on cyber security laws and policies and associated redressal mechanisms.

ABBREVIATIONS

AAP	:	American Academy of Pediatrics
ADHD	:	Attention Deficit Hyperactivity Disorder
AI	:	Artificial Intelligence
ASD	:	Autism Spectrum Disorder
ASHA Worker	:	Accredited Social Health Activist Worker
BEO	:	Block Education Officer
BGMI	:	Battlegrounds Mobile India
BUSSID	:	Bus Simulator Indonesia
CBSE	:	Central Board of Secondary Education
CCTV	:	Closed Circuit Television
COCM	:	Council on Communications and Media
CCPWC	:	Cybercrime Prevention against Women and Children
CWDN	:	Children with Diverse Needs
DPDP Act	:	Digital Personal Data Protection Act
EdTech	:	Educational Technology
ESRB	:	Entertainment Software Ratings Board
FAQ	:	Frequently Asked Questions
FGD	:	Focus Group Discussion
FIFA	:	Federation Internationale de Football Association
FOMO	:	Fear Of Missing Out
GTA	:	Grand Theft Auto
IDI	:	In-Depth Interview
IGCSE	:	International General Certificate of Secondary Education
IT	:	Information Technology
IT Act	:	Information Technology Act
ITP Act	:	Immoral Traffic Prevention Act
KII	:	Key Informant Interview
K-Pop	:	Korean Pop
KSEEB	:	Karnataka Secondary Education Examination Board

MUN	:	Model United Nations
NCPCR	:	National Commission for Protection of Child Rights
NGO	:	Non-Governmental Organisation
OTT	:	Over-The-Top
PAR	:	Participatory Action Research
PI	:	Participant Information
POCSO Act	:	Protection of Children from Sexual Offences Act
RPWD Act	:	Rights of Persons with Disabilities Act
SLD	:	Specific Learning Difficulties
UN	:	United Nations
UNCRC	:	United Nations Convention on the Rights of the Child
UNICEF	:	United Nations Children's Fund
UPI	:	Unified Payments Interface
USA	:	United States of America
VTA	:	Ventral Tegmental Area
Wi-Fi	:	Wireless Fidelity

GLOSSARY OF TERMS

Adolescent	:	Anyone between the ages of 10 and 19 years. The adolescents in this study are between 10 and 17 years.
Antikonda haage	:	Stuck (to the device)
Anime	:	Japanese animated films and shows
Chauka bara	:	Ludo
Cohort	:	A group of people with a shared characteristic. In this study, there are three cohorts of children studying in the following classes - Cohort 1: Classes 5 and 6; Cohort 2: Classes 7 and 8; and Cohort 3: Classes 9 and 10.
Children	:	Any person below the age of 18. The children in this study are between the ages of 10 and 17.
Child-centric	:	Giving priority to the interests and needs of children
Children with diverse needs	:	In this study, children with diverse needs refers to children with specific learning difficulties, autism spectrum disorder, attention deficit hyperactivity disorder, slow learners and children with processing and cognitive difficulties.
Cyber safety	:	Measures promoting the safe usage of the internet, especially in order to protect against viruses, fraud, or other forms of attack
Cyber bullying	:	The use of technology to harass, threaten, embarrass, or target another person
Digital engagement	:	The different ways an individual interacts with technology for a variety of reasons
Digital technology	:	All tools, systems and devices that can generate, create, store or process data
Edutainment	:	A blend of educational and entertainment content
Group	:	A group of children with similar diverse needs. In this study, there are two groups of children with diverse learning needs - Group 1: aged 10 to 15 years and Group 2: aged 14 to 16 years.

Jhooth mooth	:	Running and catching game
Kanna muchale	:	Hide and seek
Key stakeholders	:	The key stakeholders in this study are adolescents, parents and teachers. They are also referred to as 'study participants'.
Kho kho	:	A form of the game, tag, popular in India
Kunta belle	:	Hopscotch
Lagori	:	Seven stones game
Mara kothi	:	Tree monkey game
Mehendi	:	The art or practice of applying temporary henna tattoos
Online engagement	:	The different ways an individual interacts with technology for a variety of reasons
Parents	:	In this study, 'parents' refers to individuals whose children were approached for data collection
Rama bheema	:	Ball game
Sense of self	:	An individual's perception of the collection of characteristics that define the concerned individual
Tale kettiuththee		When the mind is occupied by too many thoughts
Teachers	:	In this study, 'teachers' refers to individuals whose students were approached for data collection
Well-being	:	The state of being comfortable, healthy, or happy

EXECUTIVE SUMMARY

Background and Context

Since its inception, the internet has slowly and steadily become an integral part of people's daily lives worldwide. Against this backdrop, it is interesting to understand how it impacts children growing up in this digital age. On the one hand, prior research reveals multiple physiological adverse impacts of digital engagement on children resulting in addictive behaviours and impaired cognitive functioning. There is also evidence of negative outcomes on adolescents' mental health and well-being. On the other hand, digital engagement has provided adolescents with multiple avenues: to aid in socio-emotional development; to expand knowledge and social connections; for skill development; to mitigate loneliness; and to even promote well-being, among others.

Research in the Indian context, including Karnataka, has validated the positive and negative impacts of digital engagement on children. The digital world is here to stay. Hence, the need to find ways to enable and empower children to navigate the online world safely and leverage its benefits.

Aim

This study seeks to obtain an in-depth and nuanced understanding of the nature of adolescents' digital engagement, with the goal of maximising its positive aspects and mitigating its negative impacts to promote healthy and responsible online interaction.

Methodology

This study followed a **mixed-methods approach**, where qualitative (Participatory Action Research and Focus Group Discussions; In-Depth Interviews) and quantitative methods of data collection (Survey) were used to obtain information from three key stakeholders: adolescents, their parents and teachers. These stakeholders can collaboratively enable healthy digital engagement. Hence, the need to understand whether synergies exist between them.

Five diverse categories of co-educational schools were identified: Learning Centre for Children with Diverse Needs; Rural Government School; Urban Government School; Urban International School; and Urban Private School. The adolescents from these schools were grouped into three cohorts and two groups. Their age range was 10 to 16/17 years.

Data from these stakeholders were triangulated to arrive at a comprehensive understanding.

Age of Digital Engagement - A Portal to the Digital World

Regarding the age of initiating digital engagement, 42 percent of the parents (24) reported that this occurred between the **ages of 12 and 14** (the ideal age being at least 12 years, according to prior research). It needs mention that most of these were children with diverse needs; children from rural and urban government schools; and the urban private school. The teachers also concurred with the parents. The data revealed a **mismatch between parents' beliefs and actions**. 53 percent of them (30) believed 15 years and above to be the ideal age to initiate digital engagement, but only two parents followed through with this. Similarly, 79 percent of them (45) believed 16 years and above to be the ideal age to possess one's own device, but 47 percent of them (27) had already given their children a device before the age of 16. Early digital engagement and device possession were predominantly observed in children from the urban international school.

Synergies prevailed between children and parents on when device possession occurred, but the teachers seemed to be less aware of this aspect.

Nature of Digital Engagement

This domain attempted to understand **why** children went online, and **what** they did online. The reasons why children went online dictated what they did online. Some of the major reasons why children went online were for educational purposes; to build on their skills; for entertainment; to socialise; to receive validation; to address emotional issues; to shop; for personal expression; to build on hobbies; to prevent the fear of missing out (FOMO); to relax, and sometimes, to find job opportunities. To do so, they accessed multiple platforms, including YouTube; over-the-top (OTT) platforms; social media; educational websites; and multiple gaming platforms.

The parents and teachers provided a broad, rather than an in-depth understanding of children's digital engagement. At times, they were even unaware of some of the information the children shared. They were most aware of children's online educational engagement, but far less aware of more concerning aspects, such as the predominance of violent online game play. Thus, large knowledge gaps prevail within this domain.

Adolescents' Engagement with Offline Activities

Children engaged in a myriad of offline activities, which **96 percent of the parents (55)** agreed with. **Sports** was the most common offline activity, followed by **spending time with friends and family**, and engaging in **creative activities**, such as reading, art and dance. A vast majority of the children preferred to spend time offline, but a glance at the amount of time they spent offline versus online shows that **online time predominates**. As children advanced in age, their online time showed a steady increase, but this was not observed with their offline time. Thus, for many children, the allure of the online world is far greater than

that of the offline world, especially in the case of boys. Children from the urban international and urban private schools spent a higher amount of time online, which was reflected in the parents' responses, as well.

Impact of Digital Engagement

Children's online engagement has resulted in multiple positive impacts. This study revealed that the key reasons that make children engage digitally (mentioned above) are because they **actively seek** some of these **positive aspects**. In addition to the details mentioned above, the children and parents also mentioned a few more positive impacts: being online has helped **build life skills**; given them **access to different kinds of lifestyles**; and helped **build language skills**.

Children expressed weariness regarding the **negative impacts** of their online engagement. Some of the major ones being that it had put a **strain on their relationships** with friends and family; led to a **decline in their academic performance**; **cut down on their sleep and offline time**; left them **feeling trapped**; led them to make **unhealthy comparisons** with people online; and given them access to **inappropriate content**. There was also mention of **cyberbullying**, **hacking** and experiences of the **fear of missing out (FOMO)**.

The parents and teachers agreed with some, but not all of the positive and negative impacts that the children listed. The parents had a better understanding of the positive impacts, compared to the negative impacts. This was not always the case with teachers, who brought to light concerning negative impacts that were not mentioned by the children or the parents. Thus, **poor synergies** prevail between the **three key stakeholders** in this domain, as well.

Monitoring Mechanisms and their Efficacy

Parents employed a multitude of monitoring approaches to (or in an attempt to) keep their children's online engagement in check. Most parents (98% - 51) use **time-based monitoring mechanisms**. Several children and some teachers additionally mentioned that parents use **violence and threats** to control their online engagement, which the parents made no mention of. Some children **self-regulated** their online engagement, but were not always successful in their efforts.

53 percent of the parents (27) felt that children responded positively to being monitored, but the **children** vividly expressed their feelings of **discontentment** towards being monitored, as parents' methods **lacked empathy and understanding**. Children had even found ways to circumvent these monitoring mechanisms, rendering them ineffective.

Most children did not believe their parents to be role models in terms of digital engagement, even though 91 percent of the parents (52) felt that they could do so. However, many parents stated that they require inputs to enable safe digital engagement in children, which could foster open communication, and adoption of more child-friendly support mechanisms, as opposed to a largely controlling approach, currently being used by many parents.

Inputs for Enabling Safe Digital Engagement

All children had received some inputs on safe digital engagement at their school, other than some children from the rural and urban government schools. According to most children, these inputs were **generic**, and most often not relevant or useful to them. However, the parents and teachers believed otherwise, indicating gaps in their perception.

Parents and teachers believed that the school had an important role to play in enabling safe digital engagement. From their responses, it was evident that they were interested in being part of awareness sessions and peer support groups organised by schools.

Parents and teachers believed that student-led initiatives should be introduced in schools in order to promote safe digital engagement. However, this was of least interest to the adolescents, as they did not feel comfortable telling other children what to do.

Awareness of Laws and Policies Surrounding Cyber Safety

Only **9 percent of the parents (5)**, and **none of the teachers** had an understanding of the laws, policies and redressal mechanisms around cyber safety that are applicable to children. Most of the teachers, and 54 percent of the parents (31) were interested in receiving this information. Access to this information could be beneficial in case of adverse online experiences that require reporting and legal interventions. Schools can take the initiative to impart education on this.

Conclusions and Recommendations

This study revealed that from the three key stakeholders, the **adolescents had the most detailed understanding of their digital engagement**. In most of the aspects, parents and teachers had an overall sense of the children's perspectives, but they seldom had a comprehensive and in-depth understanding of their perspectives. Therefore, there is a need to build bridges to eliminate the gaps in stakeholder perceptions. This can enable healthy digital engagement. The following recommendations have been put forth towards this end.

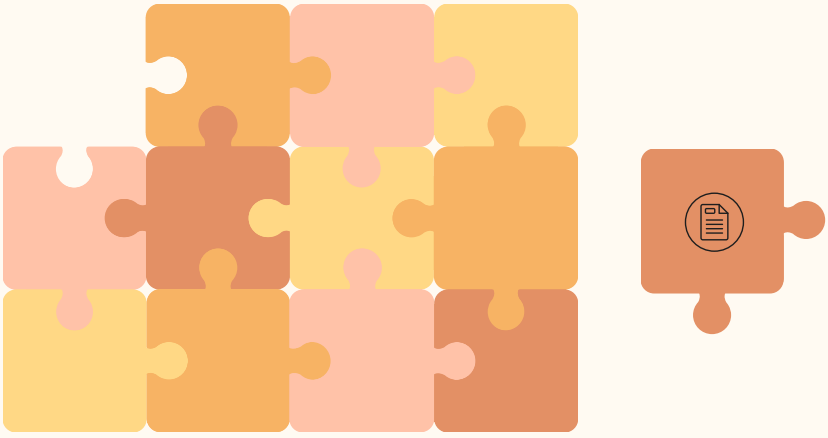
Parents can:

- maintain open communication channels with children

- mindfully guide children's digital engagement from a young age, and customise it to suit different ages, personalities and interests of the children
- guide children towards self-regulation
- enable children to develop a sense of self that is not determined or dictated by the online world
- collaborate with their children to identify suitable offline activities
- act as role models

Parents and teachers can:

- secure a measure of digital literacy
- focus on mentoring
- support children with diverse needs
- provide children with a holistic education on online safety that pertains to not just the technical aspects, but also the experiential aspects and how the associated emotions can be managed
- learn to recognise signs of digital dependency and related mental health issues



1. Background and Context

1. BACKGROUND AND CONTEXT

International Research

Digital engagement has become an integral part of the daily lives of adolescents worldwide, and India is no exception. As a medium that offers multiple avenues of engagement, such as entertainment, education, communication, and more, it has changed the way that adolescents today navigate their day-to-day lives. In a radically hyperconnected society, the manner in which they make sense of themselves; the ways in which they choose, consciously and unconsciously, to learn about the world, and let the world learn about them, is often mediated by their digital interface. Further, this ubiquitous phenomenon results in a constant reshaping of the influence it has on children and adolescents.

The physiological impact of digital engagement on adolescents has been well explored, particularly regarding brain activity and neurochemical responses. When adolescents receive 'likes' on social media platforms like Facebook, or validation on Instagram, brain regions associated with reward processing, such as the nucleus accumbens, are activated. This activation is linked to the release of dopamine, a neurotransmitter that plays a critical role in the brain's reward system[1] (Henley, 2021). Adolescents' brains are particularly sensitive to these rewards due to ongoing development, making them more vulnerable to the allure of digital interactions (Marciano et al., 2021). They seek repeated engagement with digital media to secure short-term gratification. This can lead to a cycle of seeking short-term gratification regularly, resulting in increased screen time and potentially addictive behaviours.

In a social context, serotonin can be linked to one's status in a social group (Lesch, 2007). A possible extension can be drawn between this and adolescents' social media usage, where status is determined by the number of likes and followers one has; and engagement in behaviours to maintain or build on one's status, which ultimately leads to increased social media usage (Nesi & Prinstein, 2018).

Excessive screen time is associated with a less efficient cognitive control system, implicating areas like the Default Mode Network and the Central Executive Network, which are crucial for self-regulation and executive function. This can negatively impact adolescents' ability to manage impulses and focus on long-term goals (Marciano et al., 2021). Despite this, it is a reality that in today's digitally interconnected world, children cannot be shielded completely or kept away from digital engagement.

[1] Dopamine is synthesised and released by neurons located in the ventral tegmental area (VTA), a midbrain region adjacent to the substantia nigra.

International research shows that digital engagement has varying impacts (both positive and negative) on adolescents' overall development and well-being.

On the positive axis, a review article by Magis-Weinberg et al. (2021) reveals that online engagement can serve as a means to mitigate loneliness and increase well-being in young children belonging to low- and middle-income countries. It also offers young children the opportunity to access information and education, entertainment, and engage with the world.

According to Haddock et al. (2022), consumption of digital technology in the form of video games and social media can help adolescents' socio-emotional development and mental well-being. Engagement with these platforms can be a source of skill development, creative thinking, and can help foster meaningful and empathetic relationships.

Communication via social media can help grow social connections, and even contribute to a sense of belonging in adolescents. It needs mention that the role of social media in enabling positive or negative engagement is also dependent on factors like personality type, extent of use, and response from others (Smith et al., 2021).

Adolescents view the internet as a space to share their opinions with the public, which instils a sense of confidence in them. It serves as a platform to answer their questions on taboo topics, like sex and mental health - the internet answers questions they cannot ask anyone else. It can aid in identity development, but may also create pressures to present a more acceptable version of themselves online (inauthentic representation of one's identity) (5Rights Foundation, 2021).

Thus, children and adolescents engage in an array of online activities - communication, knowledge-building, skill development, building social connections and networks, and civic participation, all of which can have positive impacts (Stoilova et al., 2021).

On the negative axis, children and adolescents can be exposed to several online risks, such as adverse user-generated content (themes of suicide and violence), cyberbullying, and sexual risks, all of which could pose dangers to the child. For instance, cyberbullying can lower psychological well-being, and lead to self-harm behaviours (Stoilova et al., 2021). Additionally, exposure to negative comments can lead to feelings of discouragement (5Rights Foundation, 2021).

Parallels can be drawn between excessive screen time linked with poorer mental health, and smartphone apps, social media, and games that have in-built (and intentionally added) addictive features to promote prolonged usage (Shapka, 2018; Montag et al., 2019).

Research in over 40 countries, including India, also shows an association between early smartphone ownership and mental health problems as an adult (Sapiens Lab, 2023).

When considering digital engagement as a whole, several studies and review articles (Kardefelt-Winther, 2017; Przybylski & Weinstein, 2017; Przybylski et al., 2020; Dienlin & Johannes, 2022; Bohnert & Garcia, 2023) have time and again arrived at the same conclusion - "no digital engagement and excessive digital engagement can negatively impact adolescent well-being/mental health, whereas, low to moderate digital engagement can promote adolescent well-being". Measures of no digital engagement and excessive digital engagement are determined in terms of screen time. Adolescents with high levels of screen time are "more likely to display poor emotion regulation, an inability to finish tasks, lower curiosity, and more difficulty making friends", and are twice as likely to be diagnosed with depression or anxiety (Twenge & Campbell, 2018). This study also contends that adolescents with moderate digital engagement are not exempt from having similar negative impacts on their mental health. This indicates the prevalence of inconclusive research on the impact of digital engagement on children's mental health.

Additional research in the Indian context reveals multiple and varying outcomes of digital engagement in adolescents.

Research in the Indian Context

46 percent of adolescents in India (aged 9 to 17-years-old) spend about 3 to 6 hours online each day, on social media, OTT platforms and online gaming (Statista, 2023). The State of Mobile 2024 report by data.ai found that the GenZ (individuals born between 1997 and 2012) population gravitate towards user-generated content (Krishnan, 2024). This indicates the patterns of usage amongst the present population of adolescents in India.

Iyer and Singhal (2023) found the main reasons for children's digital engagement to be due to peer influence, to receive validation, to combat boredom, and to fulfil their curiosity. As a child graduates from pre-teen to teen years, the amount of time spent online subsequently increases. Interestingly, no stark differences were observed between children from rural and urban settings.

A study by the National Commission for Protection of Child Rights (2021)[2] across a few Indian states reveals that 37 percent of children experience reduced concentration due to smartphone usage, and 23 percent of children frequently prefer to engage in conversations

[2] Consisting of a sample size of 3,491 school children, aged 8 to 18 years, from various socio-economic backgrounds across India.

over the phone, as opposed to spending time with friends offline. 36 percent feel that online engagement has enhanced their creativity.

Internet usage can help foster social relations, however, it has also been associated with spending less time with siblings. Children with high levels of internet usage tend to feel less lonely in social situations, but may experience high levels of emotional loneliness (Sharma et al., 2016).

Yasmeen (2023) reported a quantitative study conducted by the National Institute of Mental Health and Neurosciences (NIMHANS),[3] which found that parental rejection and parental control are risk factors associated with excessive internet usage, and were also indicative of higher levels of internet addiction. Therefore, parents play a pivotal role in supporting adolescents in developing healthy internet usage.

Child Rights and You (CRY) found that Karnataka ranks fourth in India, in terms of its internet usage, with children between 14 and 18 years of age displaying maximum usage (Bose, 2023). Given this large-scale digital engagement in Karnataka, it is worth looking into existing research in this context.

Hemmige (2018), in a survey of 300 adolescents in Karnataka, found that increased smartphone usage in adolescents has led to a reduction in time spent on recreational activities, family and sleep. The design features of a smartphone lead to its compulsive usage, with many adolescents unable to separate themselves from their devices. These findings are a matter of concern, especially for the future decades of the adolescent population.

In a study involving parents' perceptions of behaviour changes in children as a result of mobile phone usage, parents reported that children become irritable when they do not have access to a device; need to use their phones soon after waking up; and get into frequent fights with parents when they do not give them a mobile phone to use (Devamani et al., 2019).

In this context too, digital engagement acts as a double-edged sword, as research also reveals that being online enables access to answers on taboo topics, and helps in identity building, especially amongst queer children. However, the internet has also given them access to pornography and disinformation. With the surge of the COVID 19 pandemic, many children in marginalised communities found themselves online for much longer, but did

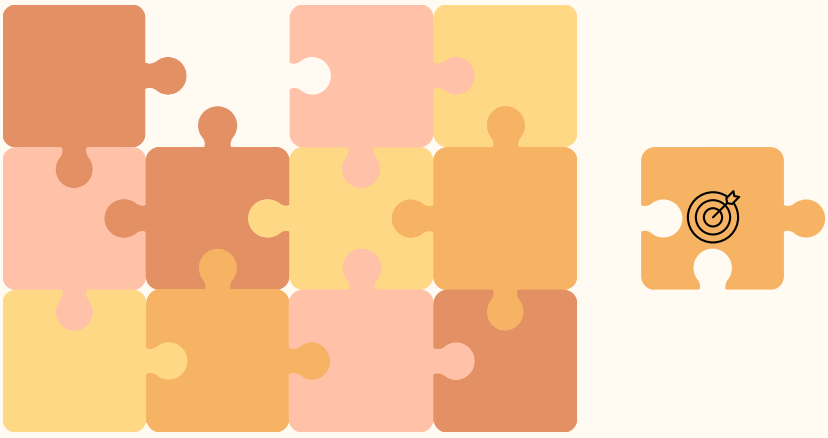
[3] Consisting of a sample size of 102 adolescents, aged 13 to 18 years.

report that their online activities led them to build on their hobbies and skills and access more information (Pillai, 2020; Pillai et al., 2023).

UNICEF (2018) suggests that in order to further children's online engagement in a positive manner, they can be equipped with the skills required to identify credible content online and engage with other netizens respectfully. This responsibility to make the internet safe lies with governments, and any policy released should be child-centred and inclusive, catering to children from different backgrounds. It is also crucial for parents, educators, and policymakers to promote responsible, respectful and safe technology usage, educate adolescents about online risks, and foster digital literacy skills to maximise the positive aspects, while mitigating the negative impacts of digital engagement.

Study Rationale

This core contention raised by UNICEF (2018), highlights the need for an exploratory study, which will examine the entire gamut of digital engagement in the adolescent population. Studies in the past have largely focused on quantitative methods to understand select slices of digital engagement and its impact on children, which may not necessarily provide a nuanced understanding of these topics. Therefore, there is a current need to prioritise *qualitative* over *quantitative* research. Stoilova (2021) draws attention to the need for a diverse sample (which could be distinguished by age, socio-economic status, intellectual ability, and geography), child-centric studies, and the need to secure a holistic understanding of the ramifications of digital engagement. Some studies refer to the positive impacts, but most seem to focus on the negatives. A child-centric study that keeps the perspectives of the concerned adolescents as the primary focus and listens to them empathetically will be useful in generating valuable insights into this beleaguered phenomenon. Furthermore, the perspectives of parents/caregivers and educators will provide a contextual backdrop to digital engagement of the concerned adolescents. Some Indian studies are child-centric, and involve other stakeholders, but focus only on a few specific aspects of digital engagement. It is important to paint a larger picture of the phenomenon, considering the various types and impacts of digital engagement. This understanding can help equip civil society organisations; policymakers; educational institutions; and parents and caregivers, to recognise and respond to the negative consequences and augment the positive influences of digital engagement. Therefore, this study was conceptualised and executed keeping in mind the following aim and objectives.



2. Aims and Objectives of the Study

2. AIMS AND OBJECTIVES OF THE STUDY

Aim

This study seeks to obtain an in-depth and nuanced understanding of the nature of adolescents' digital engagement.[4] The primary goal is to use the findings to develop recommendations that maximise the positive aspects, while mitigating the negative impacts of this engagement to promote healthy and responsible online interactions.

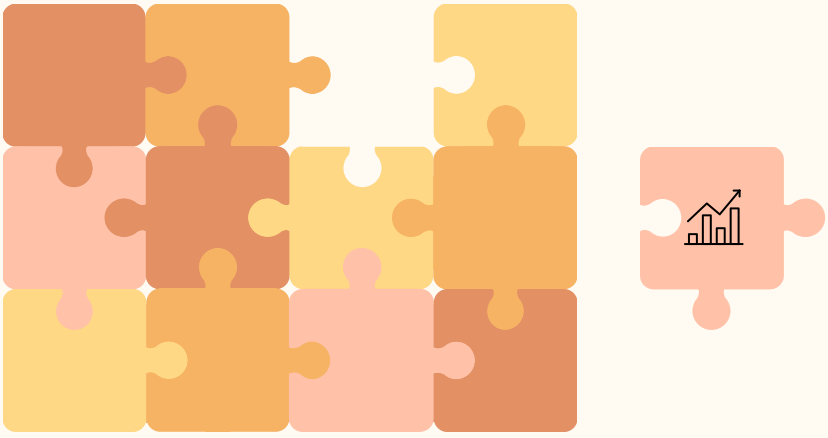
Study Objectives

1. To gain an overview of the different types of online interactions adolescents engage in
2. To understand the prevailing patterns of digital engagement (time spent, nature of content, purpose, etc.) among adolescents
3. To review the impact of digital engagement on adolescents' sense of self and well-being
4. To determine whether and how online usage has played a positive and/or negative role in adolescents' lives
5. To access information on the types of communities that adolescents build online
6. To ascertain the nature of change parents and teachers believe that is occurring among adolescents due to their digital engagement
7. To explore whether the adolescents have been exposed to inputs on safe online digital engagement
8. To understand the nature of these inputs and their utility
9. To determine the type, range and time spent on offline activities and hobbies adolescents engage in
10. To obtain information on the mechanisms parents employ for monitoring adolescents' digital engagement
11. To reveal the gaps in perception between children and adults regarding this domain
12. To gain insights into parents' and teachers' awareness levels regarding laws and policies surrounding cyber safety of adolescents, age restrictions and controls regarding device settings
13. To develop recommendations and guidelines for:
    a. promoting safe and healthy digital engagement
    b. educating adolescents about online risks and enabling cyber safety

[4] In this report, the terms digital engagement and online engagement will be used interchangeably. It needs mention that all digital engagement may not be online, but all online engagement requires digital devices. Additionally, the usage of digital devices, whether offline or online, can have similar impacts and outcomes.

c. enabling collaborative communication between children, parents and teachers regarding adolescents' online engagement

Keeping these extensive and multifaceted objectives in mind, the following methodology was adopted.



3. Methodology

3. METHODOLOGY

Data Collection Approach

The objectives warranted an exploratory study wherein, qualitative approaches assumed precedence over quantitative ones. The study was executed through a mixed-methods approach, combining both qualitative and quantitative approaches.

The study was conducted in **eight** schools/centres in Karnataka.

Inclusion Criteria for School/Centre Selection

a. schools located in both rural and urban areas
b. schools which have children from different socio-economic categories
c. government and private schools
d. co-educational schools to access all genders
e. centres which cater to children with diverse learning needs (such as specific learning difficulties {SLD}, slow learners, autism spectrum disorder {ASD}, etc.)

Based on the inclusion criteria, **five**[5] categories of schools/centres were identified:

1. Learning Centre for Children with Diverse Needs
2. Rural Government School
3. Urban Government School
4. Urban International School (affiliated to the International General Certificate of Secondary Education - IGCSE)
5. Urban Private School (affiliated to the Central Board of Secondary Education - CBSE)

Inclusion Criteria for Study Participants

Four categories of study participants were approached: **adolescents**, **parents (or guardians/caregivers)**, **teachers**, and **other relevant stakeholders** like mental health professionals, non-governmental organisation (NGO) personnel, and researchers specialising in children's digital engagement.

Adolescents

In the first category mentioned in the inclusion criteria, i.e., the learning centre for children

[5] Six categories were initially identified, which were brought down to five, due to challenges which have been explained later on in this section.

with diverse learning needs, two groups of adolescents[6] were identified. Each group consisted of children with similar learning needs. Children from this centre, aged 10 to 16 years, were approached for the study.

As for categories 2 to 5, adolescents from Classes 5 to 10 were involved in the study. This ensured access to a **wide age range**, i.e., 10 to 16/17 years. Thus, the children from these four categories schools were approached in the following manner:

- Cohort 1: Classes 5 and 6
- Cohort 2: Classes 7 and 8
- Cohort 3: Classes 9 and 10

These cohorts and groups will be referred to multiple times in the course of data presentation in this report.

Data was collected from one representative group from each of the above-mentioned cohorts and groups in all the selected schools. **Participatory action research (PAR) techniques** and **focus group discussions (FGDs)** {qualitative data collection methods} were conducted in a **single session for each identified group of adolescents**. (For details on the PAR techniques used in this study, please refer to Annexure 1.)

Based on responses from the PAR and FGD sessions, additional follow-up **in-depth interviews** (IDIs) {qualitative data collection method} were conducted with **select adolescents** from these cohorts and groups. The objective was to reach out to those displaying varying forms of digital engagement:

a. adolescents who had negative experiences in their online engagement, and displayed signs of an unhealthy engagement
b. adolescents who were able to effectively self-regulate their online time, and who showed signs of a healthy online engagement
c. adolescents who had experienced cyberbullying
d. adolescents who used digital devices for varying purposes - to manage a small online business, run a YouTube channel, or to obtain employment opportunities
e. adolescents whose digital engagement enabled personal growth and self-expression, despite coming from a less privileged background
f. adolescents whose digital engagement opened up new interest areas and opportunities for the future

[6] An adolescent is anyone between the ages of 10 and 19 years. In this study, the terms 'adolescents' and 'children' will be used interchangeably, as a child means every human being below the age of 18 (United Nations Convention on the Rights of the Child [UNCRC], 1989). The children in this study are between the ages of 10 and 16 (and in a few cases, 17).

Teachers

Key informant interviews (KIIs) {qualitative data collection method} were conducted with the teachers of each of the adolescent groups that participated in the PAR and FGD sessions.

Parents

A **survey** (via a mixed-methods questionnaire) was conducted with the parents of children who were exposed to the data collection mentioned earlier. The nuances of the questions were devised based on the responses that emerged from the children during the PAR and FGD sessions, thus maintaining a child-centric framework within the study.

KIIs with relevant stakeholders

KIIs were conducted with a **mental health professional**, **NGO personnel** and a **researcher specialising in children's digital engagement**.

This provided a 360-degree gaze on this phenomenon.

The following table presents an overview of the data collection approach, and the different types of data collection tools that were used for the study. (Please refer to Annexure 2 for all the tools.)

Table 1: Data collection approach

S. No.	Participant Category	Data Collection Technique	Data Collection Tool	Units
1	Adolescents	*Qualitative* **Participatory Action Research (PAR)** - free listing, time allocation, interest ranking (For further details on these techniques, please refer to Annexure 1.)	PAR exploration areas and observation points	**17 PARs and FGDs** Two PARs and FGDs were conducted at the learning centre for children with diverse needs; 15 PARs and FGDs at the other categories of schools
		Focus Group Discussions (FGD)	FGD Guide	**156 adolescents** in groups of five to 13 adolescents

S. No.	Participant Category	Data Collection Technique	Data Collection Tool	Units
		The PARs and FGDs were conducted in English, Hindi and Kannada, depending on the preference of the group.		(In-person data collection)
		Qualitative In-Depth Interviews (IDIs)	IDI Guide	**16 IDIs** (In-person data collection)
2	Parents/ Caregivers/ Guardians	*Quantitative and Qualitative* A **survey**, with both qualitative and quantitative questions The survey was translated into Kannada for ease of administration with parents of children from government schools.	Google Form	**57 respondents** (25 self-administered Google forms via email/WhatsApp; 22 phone interviews, and 10 in-person interviews in Kannada/Hindi)
3	Teachers	*Qualitative* **Key Informant Interviews (KIIs)** These were conducted in English and Kannada, depending on the preference of the teachers.	KII Guide	**17 KIIs** (In-person data collection)
4	KIIs with other stakeholders	*Qualitative* **Key Informant Interviews (KIIs)**	KII Guide Semi-structured Interview Guide	**Three in-person/phone call interviews** with: 1) a mental health

S. No.	Participant Category	Data Collection Technique	Data Collection Tool	Units
				professional; 2) an NGO personnel; 3) a researcher specialising in children's digital engagement

Data Processing

Qualitative Data

The data obtained from all the qualitative methods: PARs, FGDs, IDIs, KIIs and qualitative responses in the Google form were entered into content matrices that laid the data out thematically. After data entry, the data was thematically consolidated and then analysed.

Quantitative Data

The quantitative data was exported from the Google form into an Excel sheet. Tables and charts were generated from the Excel sheet.

After all the data was processed and consolidated, the findings from different data collection sources were triangulated to develop a comprehensive understanding of the phenomenon. This triangulation revealed the extent to which corroborations and contradictions emerged from the different data sources within each theme.[7]

Challenges

1. ***Securing permissions from schools***

   Securing permissions from schools posed a challenge. Different types of schools had different styles of management and procedures for granting permission. In some schools, these procedures were more long-drawn out than others. Hence, this process was initiated in June 2023, even before the commencement of this study, and was completed in January 2024. Some schools withdrew their permission due to parental discomfort with the research topic, and a general lack of understanding of the study by the school staff. Due to this, an entire category of schools which was

[7] A caveat needs mention here. Different approaches to data collection (qualitative and quantitative) are likely to yield different types of responses. The open-ended nature of qualitative data collection methods allows the study participants to share information in detail and in a non-specific manner. Quantitative data collection elicits more minimal and specific responses. To address this issue, children were approached first. Information procured from them was used to frame response categories for the parent questionnaire. Further, most of the quantitative questions for the parents also came with an open-ended option, where the parents could bring in additional and personalised responses. This enabled effective triangulation.

intended to be featured in the study - the 'rural private school' category, was removed. This was later replaced by an urban government school that had students with a similar profile.

2. ***Coordination with school coordinators***

   There were several communication difficulties with the coordinators of various schools, which further delayed the permission and/or data collection process. This was addressed by physically visiting the schools, and setting up timelines that were mutually agreed upon.

3. ***Obtaining parental assent***

   Obtaining parental assent for students to participate in the study took up a considerable amount of time, especially in the urban private and rural government schools. Initially, emails including the assent Google forms were sent out to the parents of the urban private school, but did not yield sufficient responses. To complete the parental assent process here, the researchers were present at the school on the days of parent-teacher meetings. In-person interactions with parents helped secure the required number of permissions.

   As for the rural government school, parental assent was obtained after sending reminders and timely follow-up calls to the school coordinator.

4. ***Data collection with children***

   Data collection with children posed a challenge during some of the PAR and FGD sessions. Overall, children were highly responsive and eager to share their experiences. There were, however, a few challenges encountered during two PAR and FGD sessions. Children from Cohort 1 from the urban international school and Group 1 children with diverse learning needs were initially proactive during the PAR and FGD sessions but became restless as the sessions progressed. Some wanted to excuse themselves from the session to use the washroom and a few wanted to eat. Group 1 children with diverse learning needs could not focus for the entire duration of the PAR and FGD session: a few fell asleep, and some became uncommunicative. At times, scheduled PAR and FGD sessions had to be cancelled due to the absence of a large number of students. Additionally, some students would be absent on the day of data collection, which reduced the total number of students participating in the PAR and FGD session. In some cases, this became as few as five to six students.

5. ***Availability of teachers***

   Similar to the students, some scheduled teacher interviews had to be postponed or delayed due to the unavailability of the teachers.

6. ***Time constraints during the PAR and FGD sessions with students***

   The PAR and FGD sessions, at times, had to be sped up due to the time slots provided by the school. This may have affected the way students responded, as well as the responses received. To address this, the PAR data collection techniques were

modified slightly to save time. (Please refer to Annexure 1 for more information on how the PARs were conducted in this study.)

7. ***Data collection with parents/caregivers/guardians***

   Different challenges arose in each category of school. At the learning centre for children with diverse needs, urban international and urban private schools, email and/or WhatsApp was used to send out the survey form, which required multiple follow-up attempts until responses were received. However, even after many reminders, the desired number of responses could not be obtained from these groups.

   In the government schools, it was initially decided that in-person interviews would be held with the parents to obtain their responses. However, this did not go as planned due to their busy work schedules. The researchers then conducted phone interviews with the parents when they were available. Some of these were difficult to schedule as many were unavailable.

   Phone and in-person interviews with this category of stakeholders from the government schools were conducted in Hindi and Kannada, according to their preference. Many of the parents faced difficulties in understanding the questions, which could have been due to varying levels of literacy.

   In some cases, it is possible that questions were not comprehended by the parents as intended, as there were many inconsistencies in the responses, which required intensive data cleaning.

8. ***Shifting of timelines***

   The period of data collection was initially set to take place from 14th August 2023 to 14th February 2024. However, the actual data collection was conducted from 25th September 2023 to 31st March 2024. These delays occurred due to the reasons mentioned above.

Timeline

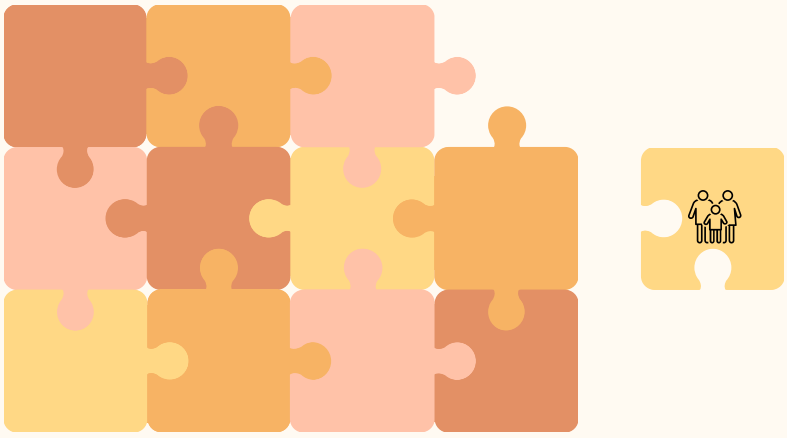
The study commenced on 15th July 2023 and ended on 31st August 2024.
The data for the study was collected over a period of six months (September 2023 to March 2024) from all categories of study participants.
Data was simultaneously entered into content matrices soon after data collection. This took place over a period of six months (October 2023 to April 2024).
Data consolidation commenced once all the data had been collected and took one month to complete (April 2024).
Data analysis and report writing commenced 1st May 2024 and ended on 31st August 2024.

Ethics Clearance

Ethics clearance was obtained from a certified body (Martin Luther Christian University, Ethics Committee). All ethical processes were adhered to.
A participant information (PI) sheet was created to inform the participants about the study objectives, and their role within it. It provided details on confidentiality, participant anonymity, risks (if any) and participant rights.

Consent forms were developed for adult participants, and assent forms for the children participants. Assent was secured from their parents/caregivers/guardians prior to data collection.

The PI sheet, consent and assent forms were translated into Kannada for the parents and teachers of the rural and urban government schools. (Please refer to Annexure 2 for the PI sheet, consent and assent forms.)



4. School Description and Profile of Study Participants

4. SCHOOL DESCRIPTION AND PROFILE OF STUDY PARTICIPANTS

Description of the Study Schools

A brief description of the five categories of schools is given below. The school names have not been mentioned to maintain anonymity.

1. ***Learning Centre for Children with Diverse Needs***
   This centre caters to children with **diverse learning needs**, such as specific learning difficulties (SLD), slow learners, autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), and children with processing and cognitive difficulties. It has two units, and children from both units participated in the study. Children aged 10 to 15 years from the first unit comprised Group 1, and children aged 14 to 16 years comprised Group 2. In this study, this school has been referred to as the 'learning centre for CWDN'.
2. ***Rural Government School***
   This category of school comprised two Kannada medium government schools located in Bengaluru Rural. Children from Cohort 1 hailed from one school, and children from Cohorts 2 and 3 hailed from another school. In this study, these schools have collectively been referred to as 'rural government school'.
3. ***Urban Government School***
   This category comprised three schools.
   Two Kannada medium government schools located in Bengaluru Urban participated in the study. Children from Cohorts 1 and 2 belonged to one school, and children from Cohort 3 belonged to another school with the same descriptors. In this study, these schools have collectively been referred to as 'Kannada medium urban government school'.
   This category of school also included an English medium school located in Bengaluru Urban. Most of the students of this school belong to families who have migrated to Bengaluru from various parts of India. In this study, this school has been referred to as 'English medium urban government school'. This school served as the replacement for the 'rural government school' category, which was excluded from the study.
4. ***Urban International School***
   This category refers to a private English medium school located in Bengaluru Urban, affiliated to the International General Certificate of Secondary Education (IGCSE). In this study, this school has been referred to as 'urban international school'.

5. *Urban Private School*

This category refers to a private English medium school located in Bengaluru Urban, affiliated to the Central Board of Secondary Education (CBSE). In this study, this school has been referred to as 'urban private school'. This school caters to children from various socio-economic backgrounds.

Profile of Study Participants

Table 2: Profile of students

S. No.	Profile Detail	Information	Percentage (n = 156)
1	Number of Students	Girls	52% (81)
		Boys	48% (75)
2	Age Range	9 to 13 years[8] (Cohort 1: Classes 5 and 6)	29% (45)
		13 to 16 years (Cohort 2: Classes 7 and 8)	29% (45)
		14 to 17 years (Cohort 3: Classes 9 and10)	29% (45)
		10 to 15 years (Group 1, CWDN)	8% (13)
		14 to 16 years (Group 2, CWDN)	5% (8)

Table 2 reveals that a total of 156 students were part of the PAR and FGD sessions. Out of the 156 who participated, most of the children were girls (52% - 81), and 48 percent (75) were boys. There was equal coverage in terms of the number of children who participated in the study, across all three cohorts (29% - 45 children per cohort). Children with diverse needs constituted 13 percent (21) of the adolescent participants.[9]

[8] The ages mentioned may not correspond to the conventional age profiles of children belonging to grades 5 to 10. It was noticed in government schools, especially, that children were older than the conventional age for their respective classes.

[9] From these 156 students, 16 were identified for in-depth interviews: six girls and 10 boys, aged 10 to 16 years, from each of the five categories of schools (about two to three students in each category of school).

Table 3: Profile of parents/guardians/caregivers

S. No.	Profile Detail	Information	Percentage (n = 57)
1	Gender	Woman	70% (40)
		Man	30% (17)
2	Age	Under 25 years	4% (2)
		25 to 35 years	25% (14)
		36 to 45 years	53% (30)
		46 years and above	19% (11)[10]

Table 3 reveals that a total of 57 parents participated in the study. A majority of them were women (70% - 40). The men constituted 30 percent (17). More than half of them (53% - 30) fell within the age range of 36 to 45 years.[11] Two of them (4%) were below the age of 25 (these were the sisters of two children from the English and Kannada medium urban government schools).

Table 4: Profile of teachers

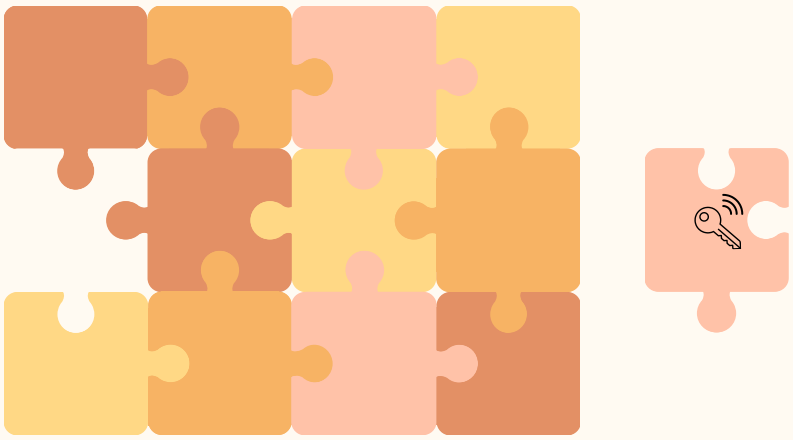
S. No.	Profile Detail	Information	Percentage (n = 17)
1	Gender	Woman	88% (15)
		Man	12% (2)
2	Type of School	Learning Centre for CWDN	12% (2)
		Rural Government School	18% (3)
		English Medium Urban Government School	18% (3)
		Kannada Medium Urban Government School	18% (3)

[10] For ease of readability, the percentage distributions throughout this report (in tables and figures) have been depicted as whole numbers. Because of this, in some cases, these percentage distributions may add up to 99, 101 or 102, instead of 100.
[11] Thus, most of them are not digital natives like their children.

S. No.	Profile Detail	Information	Percentage (n = 17)
		Urban International School	18% (3)
		Urban Private School	18% (3)
3	Age Range	35 to 55 years	
4	Years of Teaching Experience	1.5 to 27 years	
5	Age Range of Students Taught	6 to 19 years	
6	Classes Taught	1 to 12	

Table 4 reveals that a total of 17 teachers were interviewed. A majority of the teachers were women (88% - 15), and only two (12%) of the teachers were men. The age of the teachers ranged from 35 to 55 years. The teachers had varying years of experience, ranging from 1.5 to 27 years. They taught students, from Class 1 to 12, aged 6 to 19 years.

The following sections present the perspectives of all the above-mentioned study participants.



5. A Portal to the Digital World

5. A PORTAL TO THE DIGITAL WORLD

The literature review indicates that in today's interconnected era, digital devices act as powerful portals, through which adolescents gain access to a vast and multifaceted digital world. This world has an undulating terrain replete with crests and troughs. It can be mysterious, magical, revelationary, dangerous, exciting, and entertaining. It can promote delusions and become an escape from reality. It potentially opens children to both support and predation. Myriad possibilities emerge from these devices that lie at their fingertips. These range from smartphones and tablets, to laptops and gaming consoles.

Understanding the age at which adolescents begin to access these technologies, and whether they should possess their own devices, is crucial. It helps in assessing the appropriate timing and extent of their engagement with the digital realm, thereby enhancing the chances that their interaction with this expansive world is both beneficial and balanced.

Determining the ideal age for digital engagement and the ideal age for adolescents to possess their own digital devices is complex and depends on various factors including developmental readiness and individual circumstances. A study by Pew Research Center found that a significant majority of parents believe it is appropriate for children to have their own smartphones only after reaching at least the age of 12, with many suggesting the ideal range being 12 to 14 years old for digital engagement (Auxier et al., 2020). This age range aligns with a critical period of social and cognitive development where adolescents are becoming more independent and can benefit from the educational and social opportunities provided by digital technologies (Stein, 2022).

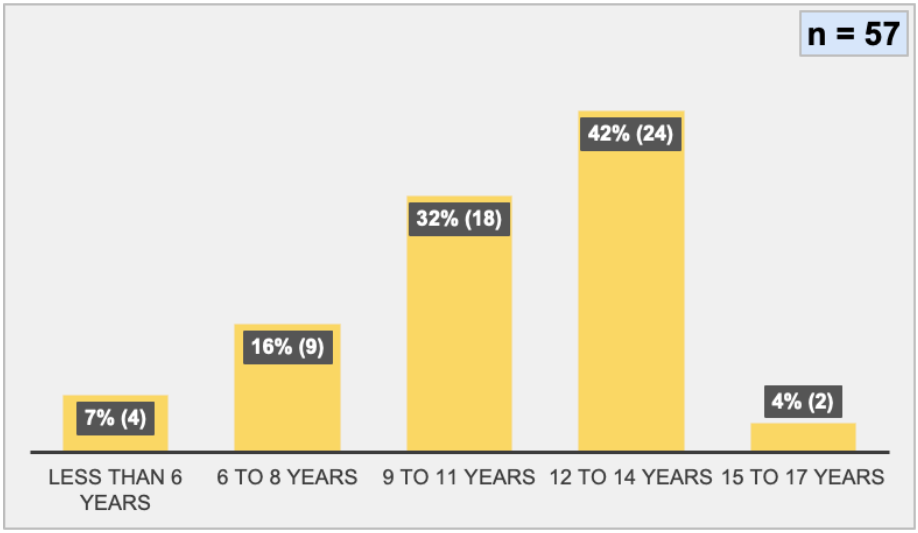
It is also a time when they can understand and adhere to guidelines about safe and responsible use, which is essential to mitigate risks such as exposure to inappropriate content, cyberbullying, and excessive screen time. The Council on Communications and Media (COCM) of the American Academy of Pediatrics (AAP) recommends that parents should evaluate their child's maturity and readiness, rather than adhering strictly to age-based guidelines (COCM, 2016). They also advise co-viewing and co-using digital media with children to help them navigate the digital landscape safely.

This study reveals some interesting trends and widely varying ages of the initiation of digital engagement.

Digital Engagement Initiation Age

This sub-section presents the perspectives of parents and teachers on this aspect. It begins with information from the parents, as they play an important role in deciding when their children go online, and when to give them a digital device.

Figure 1: Parental perception on the age children initiated digital engagement



The **parents** reported that most of their children (75% - 42) began to go online in the 9 to 14 years age group with outliers at both ends. 42 percent (24) are in the appropriate age category (as suggested by prior research). This is a satisfactory finding, but disaggregation of this data reveals most of these children hail from the learning centre for CWDN; rural and urban government schools, and the urban private school (refer to Table A3:1 in Annexure 3 for more details).

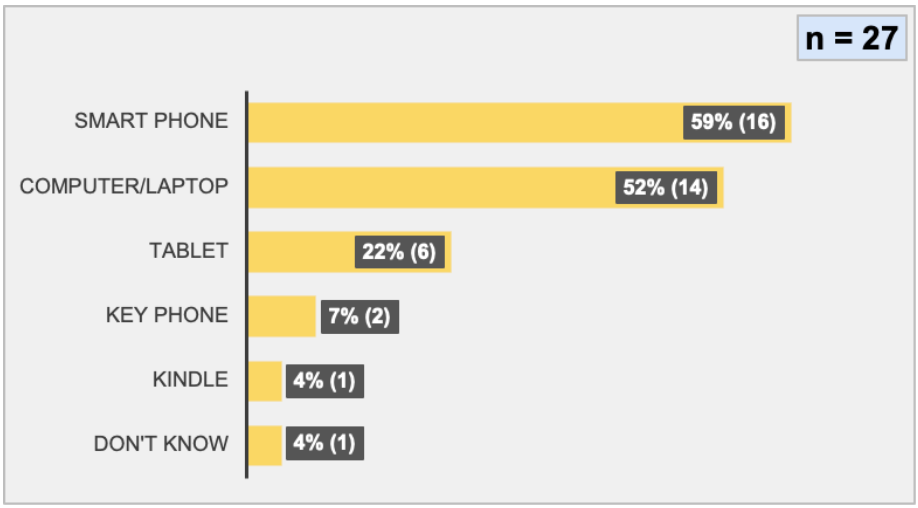
A key finding is that more than half of these parents (53% - 30) stated that the right age for initiating digital engagement is 15 years and above. (Please refer to Figure A3:1 in Annexure 3.) However, only 4 percent of them, i.e., two parents (the mother of a boy from the learning centre for CWDN in Group 2 and the mother of a girl from a rural government school in Cohort 3) actually implemented this belief. This is evidence of a clear dichotomy between knowledge and practice.

According to the **teachers** in this study, in the urban private school context, some children begin to go online at 2 to 3 years of age. They too reiterated that children with diverse needs seem to go online later (between 7 and 14 years). The teachers from the urban and rural government schools held that their students' digital engagement began as late as 13 to 14 years. Typically, these children do not possess their own device when they begin their digital engagement.

Type of Device

According to the **parents**, less than half the children (47% - 27) had their own device. (Please refer to Figure A3:2 in Annexure 3 for more details.) The figure below indicates the types of devices these children possess. It is evident that smart phones and computers/laptops predominate.

Figure 2: Type of device



Age of Device Possession

The adolescents got their devices at varying ages. Some children in the urban international and urban private schools got their phones as early as age 3. At the other end of the spectrum, for some adolescents in the Kannada medium urban government school and learning centre for CWDN, this was as late as age 15 years.

Figure 3: Age at which parents provided children with devices

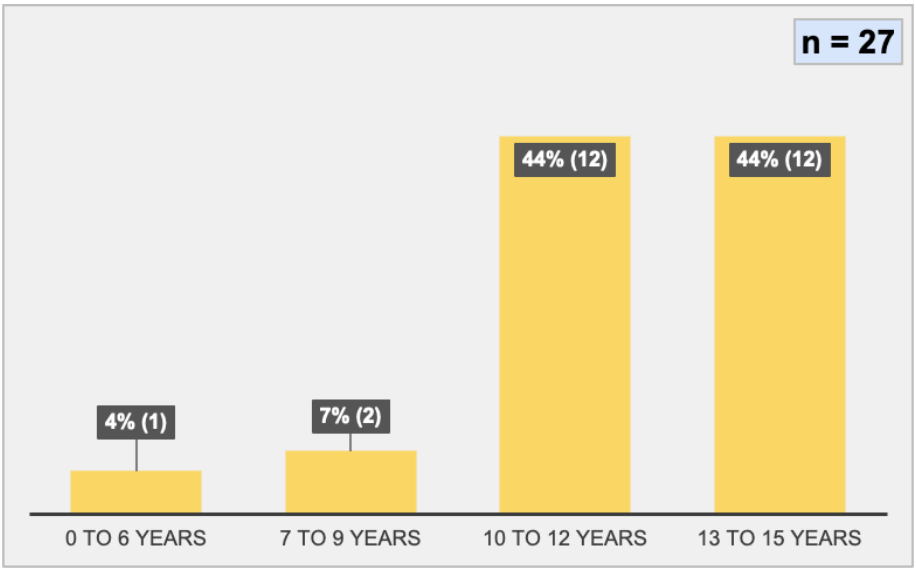


Figure 3 reveals that most of the children (88% - 24) who were in possession of digital devices received them between the ages of 10 and 15 years. It is interesting to note that upon probing, 79 percent of the parents (45) stated that the ideal age for device possession is above 16 years of age. (Please refer to Figure A3:3 in Annexure 3.) Yet, many of them have given their children devices well before this. This indicates that awareness prevails, which they are unable to translate into practice.

Regarding device possession, the adolescents and teachers indicated the following.

Table 5: Student and teacher perspectives on age of device possession

S. No.	School	Adolescents	Teachers
1	Learning Centre for CWDN	Between ages 5 and 13 in Group 1 children, and between 12 and 16 in Group 2 children	Between 10 and 11 years, according to one teacher; another one believed this to be 14 to 15 years
2	Rural Government School	No clear responses emerged	No clear responses due to lack of awareness
3	English Medium Urban Government School	Between ages 7 and 13	At age 14
4	Kannada Medium Urban Government School	Between ages 12 and 15, between 10 and 11 in a few cases	Between ages 12 and 13
5	Urban International School	Between ages 7 and 14, except for a few who got their devices between ages 3 and 5	A teacher from cohort 1 claimed, *"When children enter their teenage years, in class 11 to 12, the parents give their children mobile phones."* Another teacher stated it was age 10
6	Urban Private School	Between ages 13 and 14, except for a few who got their devices between ages 3 and 5	Wide variations emerged, where some teachers believed age of device possession was between 6 and 7 years; while others claimed it was at age 10

This table reveals that students and teachers are not always in agreement regarding the age at which the children in this study received their digital devices. It is likely that the children will have a more accurate understanding, as it concerns them directly. In the urban international and urban private schools, there were no gender-based variations. In the rural and urban government schools, more boys seemed to possess a digital device.

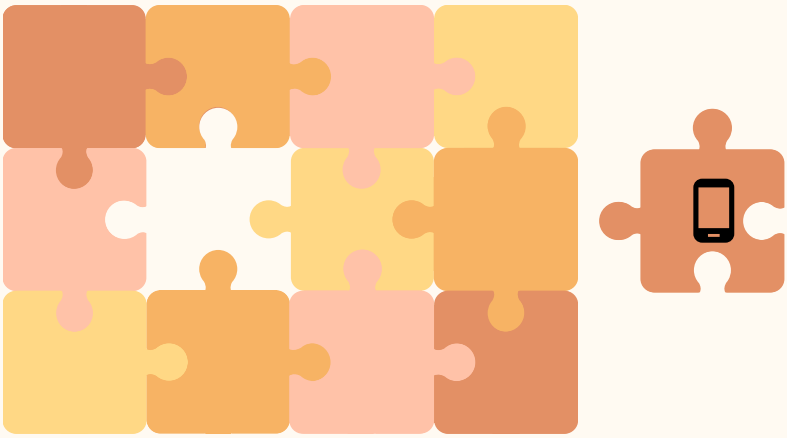
The levels of agreement between children, parents and teachers on the areas discussed in this section can be viewed in a heat map presented in Annexure 4.

Key Takeaways

Age of initiation of digital engagement plays a critical role in influencing the trajectory of a child's online behaviour. This section reveals that the parents and teachers agree regarding the age of initiation of digital engagement. Regarding the age of device possession, parents and children largely agreed, but the teachers seemed less informed.

In this study, almost half the children began their online engagement and got their digital devices at the ideally prescribed age (12 years). It needs mention that this practice seems to be higher in the learning centre for CWDN, rural and urban government schools, and the urban private school. In the case of children with diverse needs, the parents play a pivotal and a positive role in delaying the age of initiation and age of device possession for their children. The issue of peer pressure is likely to be less. In the rural and urban government schools, affordability seems to be the issue, rather than this being the result of a conscious choice on the part of the parents. But, this is likely to make them benefit from the educational and social opportunities provided by the digital world. It is a matter of concern that early device possession and digital engagement are prominent among children in the urban international school. These children may be adversely affected. Though they may belong to a higher socio-economic category, like all adolescents, they may not possess the social and cognitive maturity to deal with the onslaught of the risks associated with online engagement.

Given this broad understanding, it is now relevant to explore why adolescents go online and what the various contours of their digital engagement are.



6. Understanding the Nature of Digital Engagement

6. UNDERSTANDING THE NATURE OF DIGITAL ENGAGEMENT

This section seeks to understand why children are drawn into the digital world and what happens once they reach this space. Very often, they approach this world with a predetermined set of reasons, which could be both justifiable and beneficial. However, given the nature of the online world, which is highly contoured and multifaceted, it could drag them into spaces they could not have even conceived of.

Why do Adolescents go Online?

Adolescents engage with the digital world for a plethora of reasons. The children, parents and teachers stated the following motivations.[12] The subsequent sub-sections show the areas of overlap or the lack of it across all three stakeholders. This information is presented in diagrams.

A caveat needs mention. These diagrams represent just an overview of the areas of overlap. These do not capture the extent of the overlap. Quantitative data was procured from only the parents. Therefore, these sub-sections also show where parents were minimally in agreement, and where large numbers agreed with the other two stakeholders. Qualitative data was obtained from the children and teachers. Therefore, it will not be possible to compare numbers and percentages across the stakeholders. The text below each diagram indicates the extent to which the parents are in agreement with what the children and teachers stated. Hence, this triangulation provides an overall sense of the nature of overlap rather than clear numerical differences or similarities. It makes for a rich and somewhat nuanced understanding, as the researchers have brought to bear their understanding that emerged during data collection.

Reasons Children, Parents and Teachers Agreed on[13]

All three stakeholders (children, parents and teachers) agreed on some, but not all the reasons for children going online. The teachers and their students elaborated on different reasons. Further, the adolescents seemed to articulate their reasons within a largely positive frame, while the teachers employed a more critical lens. Table A5:1 in Annexure 5 presents details on this aspect. This comparative table unravels the variations and

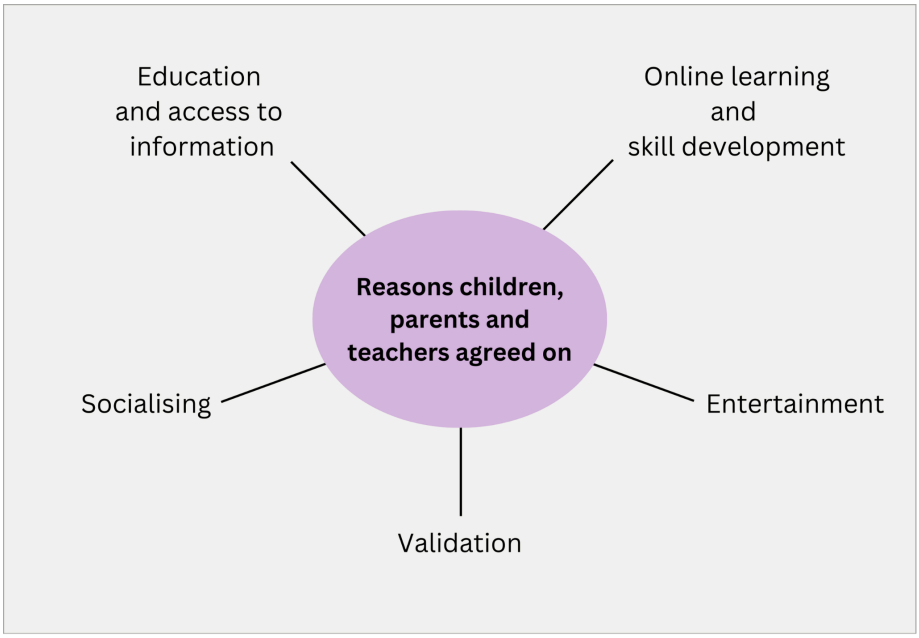
[12] Children from the learning centre for CWDN presented limited digital engagement.

[13] The term 'agreed on' has been used to indicate synergies in the responses provided by children, parents and teachers. The level of agreement between each of these stakeholders may vary, with some of the responses being more prominent in one stakeholder, and not as much in the other. A comprehensive view of the level of agreement between stakeholders can be viewed in Annexure 4.

similarities articulated by different categories of teachers and children. For comparison, Figure A5:1 in Annexure 5 presents reasons provided by the parents.

This table reveals that children from rural and urban government schools and those with diverse needs visit the digital world for a few different reasons, as compared to the other children. They are using it as a valuable resource to compensate for the disadvantages they may encounter in the offline world.

Figure 4: Reasons for online engagement children, parents and teachers agreed on



According to children, parents and teachers, being online played a crucial role in helping children access **educational and informational content**. The children spoke at length about the critical role played by online information in their **academic pursuits**. More than half the parents (91% - 52) believed that seeking education and information was the primary reason for children's digital engagement. (Please refer to Figure A5:1 in Annexure 5 to access parents' perceptions of why children go online.[14]) Teachers from all categories of schools agreed with this. Both the children and the teachers held that multiple digital sources promoted **general knowledge** and they got to learn about current events. The students also mentioned being able to access multiple perspectives on various topics through their online engagement.

[14] All the subsequent data for the parents' perception, in this section, has been drawn from this figure.

Regarding online **skill development**,[15] the students spoke of many wide ranging skills (from learning how to code, to learning how to make videos, and even learning correct pronunciations, the last being highly significant of children from government schools). This plays an important role in their lives. 25 percent of the parents (14) stated online learning and skill development as one of the reasons why children go online. The teachers did not emphasise this aspect, except to say that it enabled image-making (negative connotation).

The children and teachers both discussed the category of **entertainment**, but somewhat differently. The children seemed to exude a feel-good attitude while there was mention of *'flashy entertainment'* by some teachers. 79 percent of the parents (45) agreed that children went online for entertainment.

Children mentioned that they go online to **socialise** by communicating and staying in touch with their friends and family. The teachers and parents (11% - 6) agreed with this.

Children and teachers also agreed that they go online to receive **validation**. Only 2 percent of the parents (1) stated this as a reason why children go online. This establishes some gaps in parents' and children's perceptions.

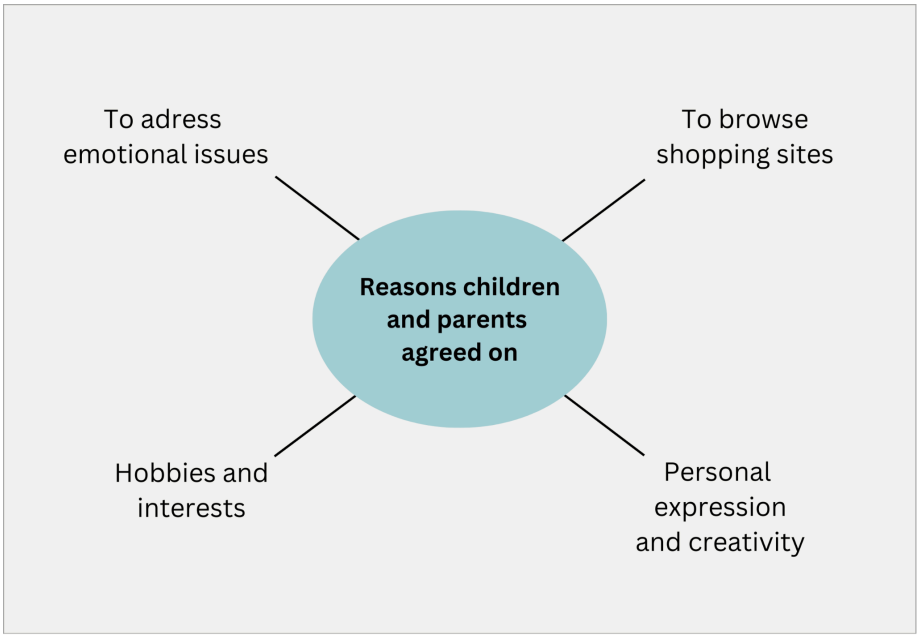
Prior research reiterates that adolescents frequently turn to social media platforms to seek validation and immediate gratification, often through likes, comments, and shares. According to Valkenburg et al. (2006), the need for social approval drives many young users to engage in frequent and sometimes excessive online interactions. This behaviour is linked to their developmental need for identity formation and peer acceptance.

The implications of seeking validation and instant gratification online are multifaceted. On the one hand, these behaviours can foster a sense of belonging and self-esteem when positive reinforcement is received. However, they can also lead to anxiety, depression, and low self-worth when the expected validation is not achieved (Nesi & Prinstein, 2015). Adolescents may develop a reliance on social media for self-assessment, which can hinder their ability to develop independent self-esteem.

[15] It needs mention that skill development continues to occur offline, as well. The children were only detailing all the aspects of their online engagement, and this emerged as one of the things they do online. It does not mean that online skill development has entirely displaced what institutions and individuals provide offline.

Reasons Children and Parents Agreed on

Figure 5: Reasons for online engagement children and parents agreed on



Children use the online space to **address their emotional issues** by sharing problems with friends, and even getting advice. 4 percent of the parents (2) agreed that children go online to **seek support and advice**. This is an established reason for digital engagement.

A study by Best et al. (2014) underscores that adolescents find online support to be particularly valuable due to the anonymity and accessibility it provides. This allows them to disclose sensitive issues without the fear of judgement or stigma. Additionally, the immediacy of online interactions enables timely advice and emotional support, which can be crucial during periods of crisis or decision-making.

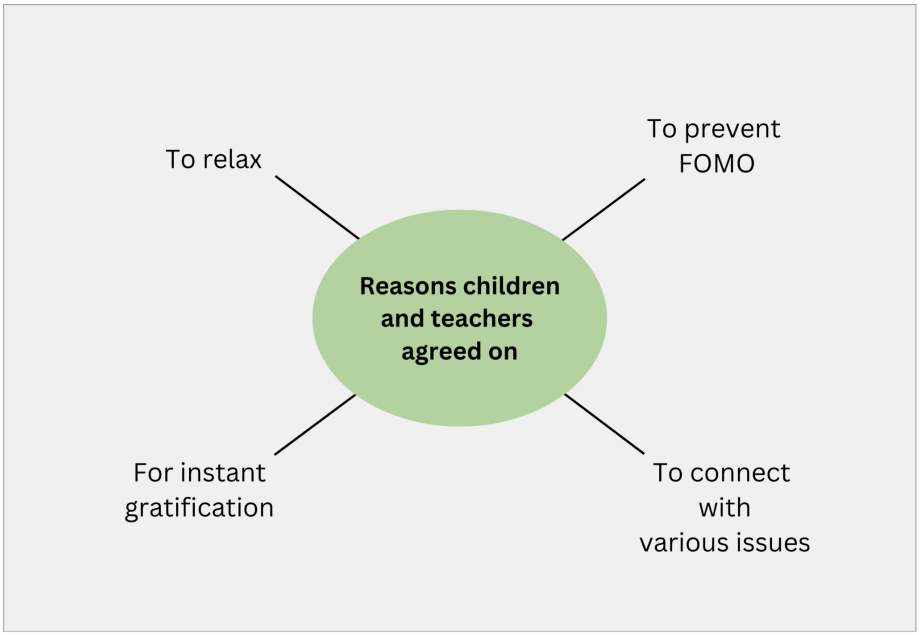
The effectiveness of online support varies, but many adolescents report positive outcomes, including reduced feelings of isolation and increased coping skills. However, the quality of advice and support can be inconsistent, depending on the reliability of the sources they consult (Best et al., 2014). Despite these challenges, the online environment remains a significant resource for adolescent support.

Children and parents (25% - 14) agreed that the adolescents go online to **browse shopping websites**. Children held that their digital engagement helped to **channelise their creativity**. 11 percent of the parents (6) agreed with this. Children also viewed the online world as a means to build on their **hobbies and interests** (such as arts and crafts,

sports, learning about car restoration, and more). 26 percent of the parents (15) felt the same way.

Reasons Children and Teachers Agreed on

Figure 6: Reasons for online engagement children and teachers agreed on



The children brought in a new category of **relaxation**. This is distinct from entertainment, which has a more active flavour to it, as compared to relaxation. It is important to acknowledge these nuances to properly understand the role played by digital engagement in adolescents' lives. They said going online helps them decompress and provides an escape. A virtual escape from their concrete world, which is replete with the pressures of academics and grim realities in the case of children from less economically privileged backgrounds. One teacher also agreed with this. Further, they spoke of wanting to go online to address the **fear of missing out (FOMO)**. A few teachers agreed that the children experienced peer pressure and wanted to be a part of the crowd. Children felt that being online helped them **connect with various social issues**, and teachers felt that such an engagement brought value to students' lives. Both teachers and children agreed that they went online for **instant gratification**. The parents made no mention of these elements, which indicates the need to build bridges in this regard.

In addition to all this, the children mentioned other reasons that neither the parents nor the teachers seemed to be aware of.

Reasons Provided by Children Only

Some children held that being online gives them **access to remote and interesting lifestyles**. A few of them maintained that they went online to **find sources of inspiration**. The children from government schools and the learning centre for CWDN stated that they were able to look for **job opportunities**. Some children also **earned money** through their digital engagement. The teachers and parents did not mention these reasons.

Reasons Provided by Parents and Teachers

A few parents (7% - 4) stated that children go online to **keep up with trends**. The teachers agreed with this, and also felt that this sometimes contributed to identity construction in children.

12% of the parents (7) shared that their children go online for **media consumption**.

The teachers maintained that children went online **to learn about what is missing in their lives**, and **to be influenced by people**.

These variations reveal the need to build bridges between children, parents and teachers so that the adults can better understand children to make their digital engagement productive and healthy.

For all the above reasons, children engage with the different components in the digital world. The following sub-section highlights what the children do when they go online.

Understanding the Components of Digital Engagement

The children, parents and teachers presented an extremely detailed picture of the multiplicity of online activities.

This section reveals that children engage in wide ranging activities spread across multiple sites, platforms and apps. Often, they engage in the same type of activity on different apps and platforms, and sometimes they use the same platform for multiple reasons. For example, they could play games on multiple different apps and websites. Conversely, they can watch videos on Instagram, and they can also use it to engage in social media related activities, like uploading stories, posting pictures, and chatting with friends. Given this overlap, finding the ideal categorisation is naturally problematic. The categorisation provided below has been adopted, as the children themselves organically defined their online activities in the following manner during the PAR sessions. This approach was deemed suitable, as this is a child-centric study.

Components of Digital Engagement Children, Parents and Teachers Agreed on

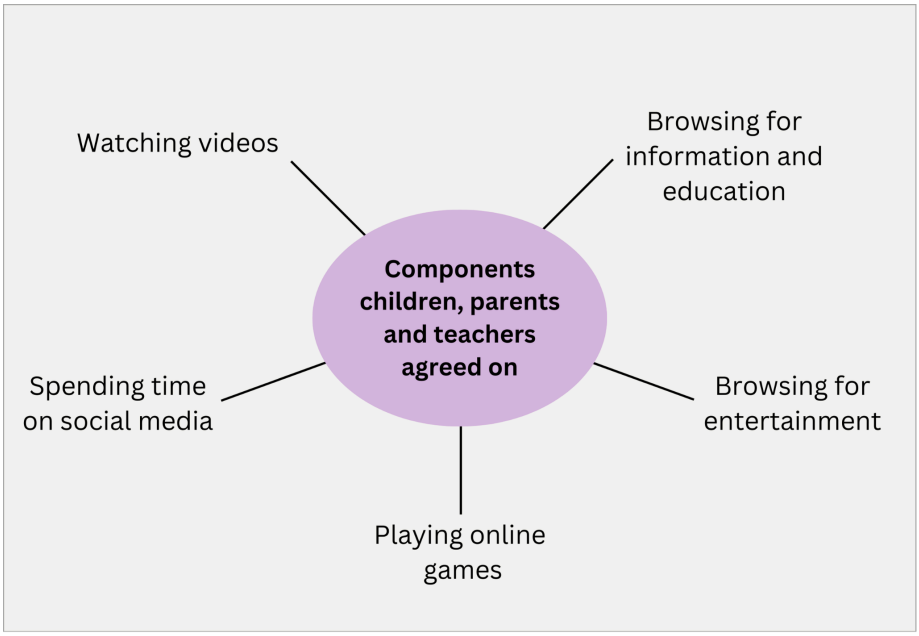
All 57 parents who participated in the study stated that their children went online for one activity or the other. The most prominent activities were watching videos[16] on different sites (93% - 53); browsing the net for information and educational purposes (89% - 51); browsing the net for entertainment (70% - 40); playing online games (65% - 37); and spending time on social media (61% - 35). Figure A5:2 in Annexure 5 provides more details on this.

The teachers did proffer information, but overall, were less informed than the parents, and even more so, as compared to the children. Some of the teachers knew the children went online, but they did not know what they did, and a few teachers of Cohort 1 were even unaware if the children had any digital engagement at all.

"These children have no digital engagement. We discourage them from going online." (Teacher, Cohort 1, Class 5, urban international school)
This contrasted sharply with information shared by her students.

"I am not aware of what my students are doing online, or whether they are online at all." (Teacher, Cohort 3, Class 9, rural government school)

Figure 7: Components of digital engagement children, parents and teachers agreed on



[16] Watching videos could be regarded as a part of entertainment, but children also watch informational and educational videos. Hence, they sought to give it a separate category.

Watching Videos

During the PAR and FGD sessions with the children, it became evident that the children watched videos on a total of 18 sites and platforms. Adolescents across all cohorts favoured YouTube for watching videos and YouTube Shorts for short-form video content. They also used as many as 17 over-the-top (OTT) platforms like Disney + Hotstar, Netflix, and more. Boys across all cohorts expressed an interest in anime, and used different sites to watch it. Anime is especially common in the English medium urban government and urban private schools. Girls from the English medium urban government school often watch Asian TV shows - Korean, Japanese, Taiwanese dramas, and more.

Regarding watching videos, some synergies between children, parents and teachers were evident. Of the 93 percent of parents (53) who stated that their children watched videos online, 89 percent (47) were aware of the specific sites and platforms the adolescents accessed (refer to Figure A5:3 in Annexure 5 for details). YouTube seemed to be the most popular (98% - 46), followed by OTT and streaming platforms (94% - 44) and social media (43% - 20). Figure A5:4 in Annexure 5 provides details on this.

The teachers corroborated that YouTube was very popular. They held that Cohorts 1 and 2 watch reels, videos, and stories. They use it to watch vlogs and other videos on YouTube, as well. According to them, OTT platforms are approached by children from Cohorts 2 and 3 for watching films and serials. Some children from government schools who did not have access to OTT channels, watched movies on illegal websites.

Browsing the Net for Information and Educational Purposes

The online world provides children with a plethora of resources that aids their education and helps them retrieve information. Parents and teachers had an idea of this as well.

Children spoke of as many as 52 sites and platforms that they use for informational and educational purposes. This is available in Table A5:2 in Annexure 5. Some age, gender and school category based variations emerged from discussions with the children. Different educational softwares, such as Canvas and Mindspark, are largely used by the urban international and urban private schools. The educational content accessed by Cohorts 1 and 2 largely pertain to school assignments, whereas online material accessed by Cohort 3 includes exam related content, like past papers and solutions (CBSE website, Karnataka Secondary Education Examination Board {KSEEB} Solutions, Papa Cambridge, etc.). YouTube and WhatsApp emerged as important educational aids amongst children from government schools, across all cohorts. It is used as a platform to revise and learn their coursework and exchange notes. Children from Cohorts 1 and 2 are involved in many non-academic, yet informational activities, such as learning new languages on Duolingo.

Possibly due to the lack of resources, the only educational tools used by children from rural areas were WhatsApp, YouTube and KSEEB Solutions.

Coding is a topic of interest mainly amongst boys. Children with diverse needs are interested in the stock market and are taking courses for the same on Zerodha Varsity. ChatGPT is an Artificial Intelligence (AI) tool that is widely used for school assignments, mainly by boys. This reveals that different categories of children are navigating the digital world effectively and in varying ways for building general awareness and promoting academic pursuits.

89 percent of the parents (51) stated that their children browsed the net for information and educational purposes. Of these 51 parents, 84 percent (43) were aware of the specific sites and platforms these children used (refer to Figure A5:5 in Annexure 5 for more details). For further details on parental perception regarding relative popularity of the different online educational spaces, please refer to Table A5:3 in Annexure 5.

The teachers reiterated that children from all cohorts and groups go online for educational purposes. They retrieve information for academic purposes and extensively use digital sources for research, project work and for completing assignments (e.g., Google Classroom). In Cohort 3, the school sends the children educational videos, and some teachers send out their assignments and study material syllabus on WhatsApp.

Browsing the Net for Entertainment

The adolescents participating in this study mentioned as many 24 sites and platforms they used for entertainment and enabling creative pursuits. For further details, please refer to Table A5:4 in Annexure 5. Some variations in usage of these platforms emerged. Photo and video editing apps are used by children from rural and government schools (English and Kannada medium). It seemed that children from government schools were more interested in decorating and editing their photos and videos with songs, stickers, and other accents. This trend was not particularly observed in children from the learning centre for CWDN, and urban international and urban private schools.

70 percent of the parents (40) maintained that their children browsed the net for entertainment purposes. Out of these 40 parents, 82 percent (33) had clarity on the entertainment platforms their children accessed. For details on this aspect, refer to Figure A5:6 and Table A5:5 in Annexure 5. Entertainment is available on multiple platforms and sites (e.g., watching videos and films is a part of entertainment, which has been referred to earlier).

A comparison between parents' articulation and the children's descriptions reveals that the parents have only a broad overview rather than a comprehensive understanding of how their children entertain themselves online. The children went into extensive details. The parents were oblivious of many of these aspects and platforms.

The teachers' perceptions revealed an even smaller slice of understanding. In addition to what the parents mentioned, they spoke of the children entertaining themselves by learning songs and singing; painting; learning yoga, etc. A Cohort 1 teacher mentioned that children go online to beautify and perfect their appearances, and this affects their ability to manage their time.

> *"5 to 10 percent go online for education and research, the rest use the digital space for entertainment."* (Teacher, Cohort 1, Class 6, English medium urban government school)

Playing Online Games

The adolescents spoke of as many as 98 games/gaming-related sites which featured in many more categories than revealed by the parents. For details, please refer to Table A5:6 in Annexure 5.

An analysis of the varying engagement with these games revealed some interesting trends. Some of the most popular games across all cohorts (and school categories) included Free Fire, Minecraft, Temple Run, Battlegrounds Mobile India (BGMI), Ludo King and Roblox. Ludo and Roblox are largely played by Cohorts 1 and 2.

It needs mention that the proportion of children playing games is much higher in Cohorts 1 and 2. Children from Cohort 3 are not as involved in playing games. This could be due to the prioritisation of academics. Another possible reason could be that social media assumes prominence at this age, hence, their interest in gaming wanes slightly.

Horror games and sports games are common amongst children from Cohort 1. These are played mainly by the boys. The girls from Cohort 1 play games revolving around make-up and cooking.

Entertainment games are most common in children from Cohorts 1 and 2, with the most popular ones being Temple Run, Ludo, and Candy Crush. Online chess is played by children across cohorts and types of schools.

Violent games emerged as the most popular category of games, with children listing as many as 16 violent games; followed by 15 strategy/edutainment games. Violent games have mild or strong depictions of violence. It is a matter of concern that violent games are played by children from all cohorts, despite age restrictions recommended by the Entertainment Software Ratings Board (ESRB).[17] Parents are allowing underage children to play games that are meant for an older age group because they are largely unaware of the content of these games.

All violent games were grouped together based on whether the main purpose of the game was to destroy/kill. Some games are less violent and graphic than others and are deemed to be child-friendly (e.g., Among Us). Some of the more graphic ones are Fortnite, Grand Theft Auto V (GTA V) and Valorant, which were mentioned by a large number of children from urban international and private schools. This is a matter of concern.

It is also worth mentioning that violent games have other aspects as well. For example, Firelight Fantasy, mentioned by the boys from the urban private school, is a video game depicted in the form of a story, with many challenges that the player tries to complete. Combatting with enemies and opponents is just one part of the game.

While there are no significant differences in the types of games played by children from rural and urban schools, differences have emerged in the types of games played by children from government and private schools. Children from government schools largely play mobile games like Free Fire, BGMI, Temple Run, Ludo King, Candy Crush, Carrom, and Jalebi, to name a few. Children from urban schools play mobile games (such as Clash Royale and Subway Surfers), as well as computer/laptop/PS5 games, such as Fortnite and Valorant.

Betting games and games involving cash prizes are played by children from government schools, mainly Cohorts 2 and 3. Children from government schools during the data collection session expressed that they wanted to earn money, and this could be a means for them to do so.

[17] For example, BGMI (formerly known as PUBG Mobile India) has an age rating of 18+, and children below the age of 18 require the consent of a parent or legal guardian to play the game (Battlegrounds Mobile India, 2023). However, BGMI is played by children from Cohorts 1 and 2, and many parents are not aware of this (learning centre for CWDN, rural government and urban private schools). Grand Theft Auto V (GTA V) and Call of Duty have a rating of 17+, meaning that such games may contain "intense violence, blood and gore, sexual content, and/or strong language" (ESRB, n.d.). GTA V is played by children across cohorts and groups (learning centre for CWDN, urban government {English and Kannada medium}, urban international and urban private schools). One boy from the urban private school (Cohort 3) shared, "*My parents got me the GTA V game, but they don't know it is 18+.*" Fortnite has an age rating of 13+ (ESRB, n.d.) but is played by children from Cohort 1 and 2, some of whom may be below 13 years of age.

Games played by children from government schools are less visually complex in terms of game design - the features are more simplistic. Many of these children play online versions of board games and other offline games, such as Ludo and Snakes and Ladders.

> Across all cohorts, most games were played by boys, especially violent ones. Girls played more non-violent games like Temple Run, make-up and cooking games.

There were no prominent differences in the games played by children with diverse needs. However, children with diverse needs played only a limited number of strategy games.

This analysis reveals that gender, age and socio-economic background emerge as significant variables influencing the kind of online games children play. The fact that boys are naturally turning to more violent games online is likely to feed into engagements in the offline world as well. Past research (UNICEF, 2024) shows that online games can have a positive impact on a child's well-being - it can help in fostering a sense of autonomy, help in emotional regulation, and build social connections, among others. However, not all video games are designed in such a manner. Violent video games can increase aggressive and violent behaviour, especially amongst young boys (Zhang et al., 2021; Wan et al., 2020).

Out of the 57 parents, 65 percent (37) stated that their children played online games. Of these 37 parents, 76 percent (28) knew what these games were (refer to Figure A5:7 in Annexure 5 for more details). These games feature in multiple categories. For details, please refer to Table A5:7 in Annexure 5. A juxtaposition of this understanding with what the adolescents shared reveals that the parents did possess a broad understanding but failed to go into as much detail as their children.

The teachers did not contribute much to this topic. Teachers from all the cohorts were aware that the children played a few games: a game that involves countries and capitals, Minecraft, Federation Internationale de Football Association (FIFA) and Bus Simulator Indonesia (BUSSID). According to one teacher from Cohort 1, gaming when not monitored makes children highly competitive.

It is a matter of concern that both parents and teachers are poorly informed of this aspect of digital engagement. Given the children's desires to better their scores, it becomes very hard for them to self-monitor this aspect. Adults need to be aware and engaged.

Spending Time on Social Media Platforms

Children spoke of as many as 21 social media platforms. Children in Cohort 1 are less engaged with social media platforms, as compared to Cohorts 2 and 3. This is to be expected. The most used social media platforms, across all categories and cohorts are

YouTube, Instagram, WhatsApp and Snapchat. Facebook, though mentioned by most students, is rarely used by them. Some students use it to stay in touch with family. Apps like Moj, ShareChat, Josh and MX TakaTak are used by children from government schools. This could be because these apps feature more regional content. Telegram is also used by children from government schools because movies are more accessible here. Twitch and Discord are social media platforms (used mainly while gaming), which are mainly used by children in urban areas. Pinterest and Tumblr are primarily used by girls, especially from Cohort 3. Boys from the learning centre for CWDN and the urban international school are on LinkedIn to look for job opportunities and make connections that may be useful for college or choosing careers.

61 percent of the parents (35) stated that their children were on social media. This includes parents of children in Cohorts 1 and 2 who are legally debarred from accessing platforms like Facebook and Instagram.

Out of these 35 parents, 94 percent (33) were aware of the specific platforms their children used (refer to Figure A5:8 in Annexure 5 for more details). Table A5:8 in Annexure 5 details the different platforms, with WhatsApp emerging as the most popular. They mentioned only seven platforms. The students revealed a much more detailed picture. This indicates that the parents are not well-informed in this regard.

The teachers corroborated some aspects of this very detailed picture revealed by the students. They maintained that social media is an important source of communication for Cohorts 1 and 2 and children in Group 2 from the learning centre for CWDN. They believed that children in Cohorts 2 and 3 and those in Group 1 from the learning centre for CWDN used Facebook and Instagram. Snapchat, Discord and Zoom are accessed by children in Cohort 3 and Group 2 in the learning centre for CWDN.

The above description speaks of the need for both parents and teachers to familiarise themselves with what the children are doing in the social media space.

Independent Online Shopping

Children across cohorts shared that they would independently browse shopping sites and inform their parents if there was something that they wanted to purchase. The children spoke of accessing a total of 19 online shopping and shopping-related platforms. For details, please refer to Table A5:9 in Annexure 5. The information shared by these adolescents presented some interesting trends.

Meesho, Myntra and Ajio are online shopping sites that are used by many children across categories and cohorts. These were largely mentioned by girls. Meesho is an affordable

shopping option, whereas Myntra and Ajio sell products with a varied price range, from inexpensive to higher-end. Girls from the urban international and urban private schools use higher-end shopping websites like Nykaa, Zara and H&M. Children with diverse needs are not as involved in online shopping.

A few children from urban government settings have access to their parents' Unified Payments Interface (UPI) passcodes. This enables them to engage in some amount of independent shopping. Some children mentioned using their parents' UPI accounts to pay for groceries. Many of the children who shop independently online are from government schools.

Out of 57 parents, 25 percent (14) believed that their children shopped online independently. From these 14 parents, 86 percent (12) were aware of the platforms and sites their children used for this purpose (refer to Figure A5:9 and Table A5:10 in Annexure 5 for more details). Amazon emerged as the most popular, followed by the different food delivery apps.

Most of the teachers had no information on this aspect of online engagement.

In addition to these broad categories which all the three stakeholders provided information on, the adolescents referred to influencers.

Following Influencers

The children listed as many as 85 people that they look up to, admire, or whose content they enjoy consuming. Parents and teachers were unaware of any of these, except in two instances.[18]

These influencers included YouTubers and social media influencers of different categories (comedy, lifestyle, information/education, gaming, bodybuilding, sportspersons, musicians, actors and TV personalities, personalities of historical importance, businessmen, etc.) Regarding trends, children from government schools follow content creators who are Indian (Riyaz Aly, Crazy XYZ), and create content in local languages, like Hindi.

Children from the urban international and urban private schools follow creators from all over the world, but largely the USA (United States of America). Boys seem to gravitate towards content related to gaming, bodybuilding, outdoor activities and motivational content. On the other hand, girls seem to be attracted to lifestyle-related content. Most boys

[18] 1 out of 57 parents did mention 'influencers', along with one teacher from Cohort 2.

consume content from other men or boys; and girls consume content from other girls or women.

The boys mentioned the following influencers and renowned persons: Sandeep Maheshwari, MrBeast, sportspersons like Ronaldo and Virat Kohli, Ambedkar, etc. The girls did not seem to follow a common group of influencers like the boys. More children from Cohorts 2 and 3 followed these influencers.

> The children did not seem to find these influencers influential enough to actually emulate them.

Apart from understanding all the elements of digital engagement, it is also relevant to understand what children enjoy the most. It is likely these will become the key components of their online activity. Illuminating this aspect is critical for developing a nuanced gaze on this phenomenon.

Preferred Online Activities

In the PAR and FGD sessions, the adolescents across the board (except for children with diverse needs) revealed that some form of social media was the most preferred online engagement. Spending time on YouTube and Instagram came at the top of the list. The teachers agreed with this.

The boys from all schools and cohorts repeatedly ranked games as the most enjoyable online component. The children with diverse needs especially emphasised games and entertainment.

According to the teachers, the girls spend time online in a more responsible and positive manner. They spend more time on educational sites and social media. This was reiterated by the girls from the rural government school category, who gave online educational content top priority. Thus, their digital engagement seems to be the healthiest, this is perhaps because they have both limited access to devices and limited time online. The teachers also stated that girls from the rural government school category spend less time online as they are burdened with household chores.

They maintained that boys spend more time online as compared to the girls. The boys are more interested in gaming and sports. The competitive nature of the games that these children play is evident through their need to better their scores, which make it difficult to control the amount of time they spend online.

Key Takeaways

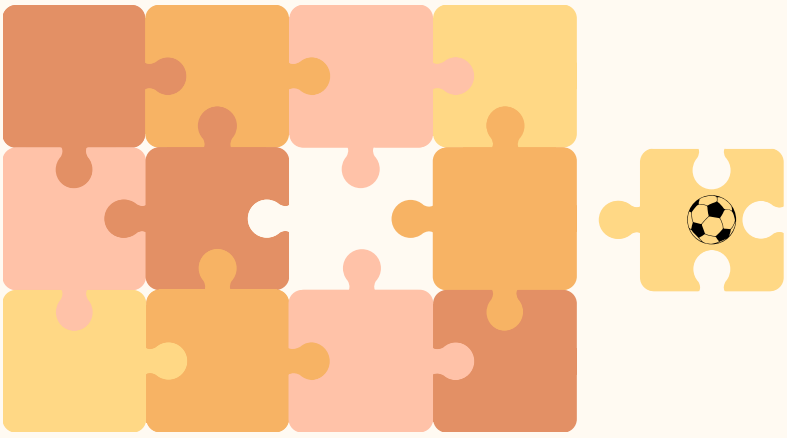
This section reveals that the children articulated their reasons for going online within a largely positive framework. They were able to provide a long and detailed list of reasons which the adults did not present.

All these very many reasons took the adolescents to wide and varying forms of digital engagement through multiple sites, apps, and platforms. There are both commonalities and differences in how children from different age groups, genders and schools engage online.

It is evident that some parents are better informed than others about what their children do online. Parents from the learning centre for CWDN, urban international and urban private schools seemed to be more aware of their children's digital engagement and the platforms used by them, as compared to parents from all the other school categories. In the case of parents whose children went to government schools, sometimes their own literacy levels raised barriers to their understanding of their children's online activities.

Regarding all these components, the teachers and parents had an overall sense but not an in-depth understanding of how their students engaged online. With the exception of one parent and one teacher, the others made no mention of influencers at all. They seemed to be most aware of their children's online educational engagement. This is because they prioritise this component, which is not so for a large proportion of the adolescents in this study. Further, this is the healthiest component of their engagement, which does not need much attention from adults. Types of digital engagement that could potentially lead to problems like gaming, entertainment and social media, were not widely or deeply understood by the adults. This lacuna needs to be acknowledged and addressed. Annexure 4 provides a graphic understanding of the nature of synergies or the lack of it therein between the three key stakeholders.

Further, online engagement of these adolescents is highly multi-dimensional for each one of them. These cannot be simplistically categorised into being either healthy or unhealthy. The case vignettes presented after Section 12 provides a detailed picture of how and why children engage online in different ways.



7. Adolescents' Engagement with Offline Activities

7. ADOLESCENTS' ENGAGEMENT WITH OFFLINE ACTIVITIES

Encouraging adolescents to engage in offline activities is vital for their holistic development. These activities promote physical and mental health, enhance social and cognitive skills, and improve sleep quality, all of which are essential for fostering a well-rounded, healthy lifestyle. Diverse offline activities can support their growth into well-adjusted and capable adults (Diamond & Lee, 2011; Eime et al., 2013; Hale & Guan, 2015; Janssen & LeBlanc, 2010).

This study reveals that these adolescents engaged in a range of offline activities.

Types of Offline Activities

This section draws attention to the degree of overlap, or the lack of it therein between children and parents regarding how the former spend their time offline.

Figure 8: Adolescents' and parents' perceptions on types of offline activities

This study shows that all children spend time entertaining themselves offline as well. 96 percent of the parents (55) stated that their children engage in one offline activity or the

other, and 95 percent of them (54) listed what these offline activities were.[19] Most of the parents' responses overlapped with the responses provided by the adolescents. Details of the parents' responses are provided in Figures A6:1 and A6:2 in Annexure 6.

Sports emerged as a popular offline activity. Children from all cohorts mentioned sports like football, badminton, basketball, and cricket. Children from Cohort 1 also spoke of skating, walking, and running, while those in Cohorts 2 and 3 additionally spoke about hide and seek, sprinting, *kho kho*, chess, volleyball, skipping, handball, throwball, tennis, yoga, and general exercise. 70 percent of the parents (38) mentioned sports as well.

Apart from these sports, the children from the rural government schools mentioned **local games** like *lagori* (seven stones) and *kunta belle* (hopscotch). Some variations across rural cohorts were noted. For example, Cohort 1 children additionally mentioned **board games** like *chauka bara* (ludo); cooking games; *jhooth mooth* (running and catching); playing with clay and craftwork. Children from Cohort 2 mentioned *kanna muchale* (hide and seek); *mara kothi* (tree monkey); colour, colour which colour; *Rama Bheema* (a ball game); and fishing. 13 percent of the parents (7) stated that children played board games.

This indicates the prevalence of age-appropriate games amongst children.

Spending time with parents, **siblings**, **friends and animals** was also mentioned by many children. Spending time with friends meant going to the mall, shopping, caring for pets, and hanging out with friends (articulated by children from the urban international and urban private schools). Some of these children of Cohorts 2 and 3 said that annoying their siblings is the *"best game of life"*. Boys from Cohort 2 from the rural government school spoke of *"stealing and drinking tender coconut"*. Boys from Cohorts 2 and 3 from the rural and urban government schools said that they go on bike/car rides.[20] Girls from Cohorts 2 and 3 from the rural and urban government schools helped their younger siblings with school and housework. None of the children in Cohort 1 mentioned family time. Parents corroborated that children's offline time included spending time with friends (63% - 34); playing with siblings (39% - 21); and spending time with parents (2% - 1).

Creative pursuits shared by children and parents included **reading** (33% - 18), **art** (30% - 16), **dance** (17% - 9), **music** (6% - 3) and **theatre** (2% - 1). Children additionally mentioned writing, sewing, photography, mehendi designing, and playing instruments.

[19] Out of the 55 parents who stated that their children engage in offline activities, one of them opted for 'none of the above' when selecting the the range of offline activities, because of which only 54 parents have been featured in the figure highlighting parents' perception of children's offline activities (Figure A6:2 in Annexure 6).

[20] These boys did not meet the legal age requirement to drive a bike/car (16/18 years, respectively). However, this did not seem to be a matter of concern to them.

Cooking was regarded as a creative and fun activity by children from Cohorts 2 and 3 in the urban international and urban private schools.

"I have written and published my own book." (Boy, Cohort 1, Class 6, urban private school)

"We enjoy doing mehendi designing." (Three Girls, Cohort 2, Class 8, English medium urban government school)

"I earn money from putting mehendi on people." (Girl, Cohort 2, Class 8, English medium urban government school)

Household chores were the mandate of Cohorts 2 and 3 in the rural and urban government schools. These included helping their mothers iron and wash clothes, cut vegetables and cook. 9 percent of parents (5) mentioned household chores as well. **Meditation** was an offline activity a few children from Cohort 2 engaged in, which 2 percent of the parents (1) agreed with.

Besides this, children from Cohorts 2 and 3 and Groups 1 and 2 from the learning centre for CWDN also added **relaxing**, **partying**, **eating**, **sleeping**, and **travelling** as part of their offline activities.

"I collect money and then use it for partying." (Boy, Cohort 2, Class 8, Kannada medium urban government school)

"I often daydream in a dark room." (Boy, Group 2, learning centre for CWDN)

Some other unrelated pastimes were shared as well.

"I spend time organising my room and my life." (Girl, Cohort 2, Class 8, urban private school)

"I love analysing customer service systems. My interest in this began after I learned about stock market trading and e-commerce." (Boy, Group 2, learning centre for CWDN)

Parents additionally mentioned that children did their homework (4% - 2) and tutored younger children during their offline time (2% - 1). The latter was shared by the sister of a girl from a Kannada medium urban government school (Cohort 3).

No stark gender differences were observed in the offline activities of children from any of the schools, except in a few cases. Regarding sports, a larger proportion of boys played these, compared to the girls. The girls talked about more creative activities, like arts and crafts, compared to the boys. Only the boys spoke of going on bike and car rides.

Children from Cohort 2 listed more offline activities than the other cohorts. They seemed to be attending more structured classes pertaining to their offline interests.

Apart from getting the students to list their offline activities, an attempt was also made to understand what they felt about these.

Adolescents' Feelings about Offline Activities

Across all schools, cohorts and groups, children unequivocally stated that they preferred spending time offline.

From all these cohorts, a range of reasons justified and explained this stance. Several children in Cohort 1 held that they enjoy this because they can connect with people directly. It is more satisfying because they get to make their own decisions and can exercise control over what they are doing. Children from Cohorts 2 and 3 spoke of the immense happiness offline activities bring, which does not come from online engagement. This strengthens friendships and makes one healthy.

> *"Playing with friends is a big joy. Time flies but when we get onto a mobile, we feel like we are stuck to it and cannot control ourselves (antikonda haage)."* (Boy, Cohort 2, Class 8, rural government school)
>
> *"Life is realistic and enjoyable offline."* (Boy, Cohort 3, Class 9, English medium urban government school)

Despite being aware of the value of offline activities, many of them confessed that they are unable to spend enough time doing these for a variety of reasons. The post-COVID world took them into the online space and made them dependent on it. One child admitted that she gets a dopamine rush from being online, which is not replicated offline. The children also revealed that they would like to play with their friends, but the allure of the online world does not release them. But, when they do play with their friends, they really enjoy it.

> *"I used to read a lot more, but after I got onto social media, my reading has decreased."* (Girl, Cohort 3, Class 9, urban international school)

The children looked bright and animated when they talked about their offline hobbies, activities and pastimes. The general feeling was that they want to spend more time offline, but their digital engagement inhibits this. There seems to be a loss of control over how these children allocate their time. It is now relevant to explore how much time they spend offline and online.

Quantum of Time Spent Online Vis-À-Vis Online Engagements

The Council on Communications and Media (COCM) suggests that for children aged six years and older, including those aged 10 to 16, consistent limits on screen time should be set, balancing screen time with other healthy activities, such as sleep and physical activity. They recommend no more than 1 to 2 hours of recreational screen time per day. However, the focus is more on promoting a balanced media diet that includes productive and educational uses of technology alongside physical and offline activities (COCM, 2016).

Data from this study revealed that on average, children are not adhering to the prescribed ideal quantum of online time. This section juxtaposes perspectives of children, parents, and teachers, on how much time is spent offline and online.

Time Spent Offline

Most children stated that they spent 30 minutes to 4 hours per day offline, and even longer on weekends. Out of 54 parents,[21] 76 percent (41) believed that their children spent 0 to 2 hours offline on a daily basis. For more details, refer to Figure A6:3 in Annexure 6.

> *"We are offline 50 to 80 percent of our time."* (Boys, Cohorts 1 and 2, Classes 6 and 8, urban private school)

A comparison with time spent online reveals some interesting patterns.

Time Spent Online

The adolescents in Cohorts 2 and 3 from the urban international school seem to be spending the most time online - 3 to 8 hours per day on weekdays, and on an average, 9 to 15 hours a day on the weekends. Children from Cohorts 1 and 2 from the urban international school stated that they watched movies for hours at a stretch. On the whole, across cohorts, children spent 5 minutes to 9 hours online. According to teachers, this ranged from 30 minutes to 4 hours per day.

[21] Out of 55 parents who stated that their children spent time on offline activities, 54 people responded to the question on the quantum of time spent offline.

> *"Once, I watched movies for 15 hours at a stretch. It was a movie marathon."* (Boy, Cohort 1, Class 5, urban international school)
>
> *"I binge watch two movies back-to-back."* (Girl, Cohort 2, Class 8, urban international school)

The parents' responses reveal that about half of them (51% - 29) believed that their children were online for less than one hour on a daily basis. It is important to note that these were largely parents of children who attended the learning centre for CWDN, and rural and urban government schools. Only two of these parents had children who go to urban private and urban international schools. This highlights the fact that children from the latter categories are spending excessive time online, which comes with predictable implications. For more details, refer to Figure A6:4 in Annexure 6.

Information procured from teachers and adolescents at the learning centre for CWDN seemed to be similar. The children revealed that Group 1 spends more time online (usually 1 to 3 hours, with a maximum 10 hours per day), as opposed to Group 2 children (3 to 4 hours per day). The teachers from this school held that children from Group 1 spend only 1 to 3 hours per day, which can occasionally increase to 5 hours, and that Group 2 children spend 4 to 5 hours on weekdays and 4 to 6 hours on weekends. Table A6:1 in Annexure 6 presents comparative information from children and teachers from different cohorts in terms of the average time spent offline and online. The teachers did not corroborate what the children said.

The children and teachers from the different schools spoke of varying time spent online. Most of the children claimed that they spent more time online on the weekends as they use the digital space for entertainment purposes, and to do homework and assignments.

The language of these children reveals a sense of guilt and loss of control. Children from Cohorts 1 and 2 from the rural government schools seem to have limited access to digital devices, hence spending very little time online each day. Only one or two of them spend 2 to 3 hours online per day.

From the children, it became evident that across all cohorts, the boys are spending more time online, as compared to the girls (this was more pronounced in the rural government schools). Only one teacher countered this by saying:

"Girls sit at home most of the time, and don't spend time outside because their parents don't allow them. They then spend this time online, as it's a way to see the world outside." (Teacher, Cohort 3, Class 9, English medium urban government school)

The adolescents indicated that online time increased as children advanced in age. The table below shows that this incremental increase was not evident with their offline time. This trend reiterates the importance of 'late' digital engagement and access to devices.

Table 6: A comparison of the time children spend offline and online

Cohort/ Group	Time Spent Offline	Time Spent Online
Group 1 (CWDN 10 to 15 years)	From 1 hour up to 5 hours	1 to 3 hours (up to 10 hours, at times)
Group 2 (CWDN 14 to 16 years)	From 30 minutes up to 4 hours per day	From 1 hour up to 4 hours per day
Cohort 1 (Classes 5 and 6)	From 30 minutes to 2 hours per day	From 5 to 30 minutes, to a maximum of 2 hours per day
Cohort 2 (Classes 7 and 8)	From 1 hour up to 4 hours (up to 9 hours on the weekend)	From a few minutes[22] to five 5 hours per day (up to 8 hours on the weekend) One boy mentioned 24 hours, but this can be interpreted as very long hours
Cohort 3 (Classes 9 and 10)	30 minutes to 4 hours per day	From 45 minutes to 9 hours per day (9 hours, and sometimes more on the weekends)

[22] One child actually said one second but more to indicate that very little time was spent online.

Key Takeaways

This section presents some interesting trends. Overall, the parents have a better understanding as to what their children do offline rather than online. This is markedly evident in Annexure 4. While this is undoubtedly of value, it also is a reflection of parents' capabilities and priorities. Offline engagements are easier to understand than children's online activities and parents could be attributing more value to these.

The children in this study are pursuing a wide range of healthy offline activities and interests. This could open potential doorways for enabling productive online engagements.

Sports emerged as a prominent offline activity which promotes well-being. There are differences in types of offline games the children play based on age, gender and school category. In the offline games and sports world, children are engaging in age-appropriate games. The online gaming world takes them to age-inappropriate games. This indicates that the offline world is a safer space for children. Online and offline games are both more favoured by the boys. Section 6 reveals that boys spend most of their online time on games which are violent in nature. Guiding them away from these and steering them towards healthy offline sports could mitigate the effects of their online gaming engagements.

This section also reveals that the same activity could play a different role for different categories of children. For example, cooking was regarded as a creative pursuit for urban international and urban private school children, while it was a household chore for children (mostly girls) from government schools.

Children from urban international and urban private schools are not able to balance their offline and online engagements in a healthy manner.

There are clear gender differences in time spent online, with all stakeholders maintaining that boys spend more time online as compared to girls.

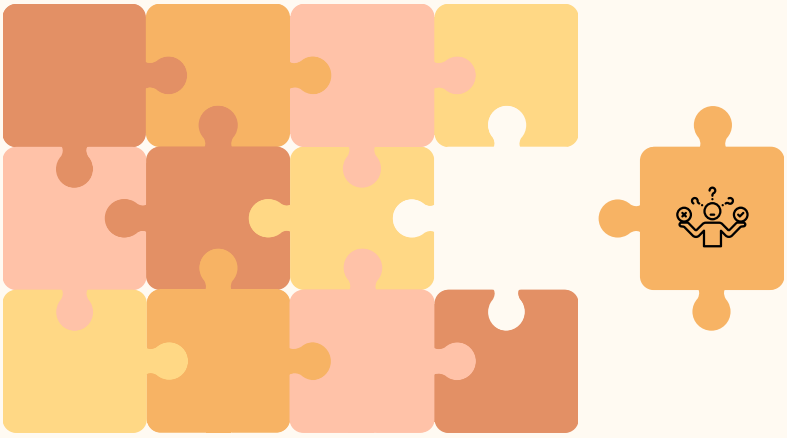
There is a marked escalation of online time across the board, over weekends. As parents are also free at this time, this could be the window to introduce and sustain offline activities.

In conclusion, this section establishes that most children prefer offline activities and hobbies, but get dragged into their digital engagements, which often lack the quality of

mindfulness, unlike their offline engagements. There is a loss of control in how they would ideally like to allocate their time between offline and online engagements. This seems to be a call for help from the concerned adults.

Prior research provides some explanations for this shift. Adolescents are increasingly choosing online games and digital activities over offline hobbies, driven by the design features of these platforms that promote addictive behaviour. Engaging gameplays follow certain design principles to build an entertaining experience that entices players to return again and again. The application of these principles through the essential elements into game apps creates a repetitive sequence of anticipation and reward which is at the core of any multimedia game design. The better the orchestration of these sequences, the more immersive the game is (Gametion, 2023).

The implications of this shift are significant. As adolescents spend more time on digital platforms, they may neglect offline activities that are crucial for their physical, social, and emotional development. Studies suggest that this can lead to a range of issues, including reduced physical activity, poorer social skills, and increased risk of mental health problems, such as anxiety and depression (Twenge & Campbell, 2018).



8. Impact of Digital Engagement

8. IMPACT OF DIGITAL ENGAGEMENT

Engagement with the online world opens the portal to a myriad of opportunities, risks and resources. As children traverse these terrains, they are met with adventures that enable growth and development, leaving them with a sense of nourishment; but other times, they run into dangers, or the not-so-kind parts of the terrain, which leave them in a state of dismay.

A broad overview of this domain (as articulated by all the three key stakeholders in this study) suggests that 44 percent of parents (25) are of the opinion that digital engagement has had both positive and negative impacts on their children. Figure A7:1 in Annexure 7 provides more details on this. Most of the children and teachers agreed with this. 19 percent of parents (11) stated that digital engagement has had no impact on their children, but the responses from the children and teachers did not corroborate this, as they clearly stated that there were both positive and negative impacts.

This section delves into the nuanced impact of digital engagement by first understanding what kind of communities children build online and the value of these. This area has been handled separately because past research reveals this is a significant outcome of digital engagement for adolescents.[23] It then follows these children on their journey through the online world, illuminating their positive and the negative experiences alike. These wide ranging outcomes include the impact on the adolescents' sense of self and well-being. An attempt is made to understand the multiple and complex impacts from the perspective of all three stakeholders to explore extent and nature of overlap.

Nature of Communities Built Online

Positive and negative impacts are likely to emerge from building online communities. In some cases, it can be beneficial to children - it allows them to build on their interests and passions. It is also an avenue for children to build on their social connections and expand their friend circle. On the other hand, being online exposes children to a number of individuals that they are not familiar with, some of whom could be potentially abusive (Livingstone et al., 2017).

Of all the students (156) who participated in the PAR and FGD sessions, only three students concretely mentioned the online communities they had built, and the importance these

[23] Digital engagement plays a crucial role in building online communities by facilitating social interaction and collaboration among individuals with shared interests. Online communities thrive through digital engagement, which enhances social support, information sharing, and collective identity among members. (Kraut et al., 1998; Ridings & Gefen, 2004).

held - ranging from a client community built through running a small business (a girl from Cohort 2, urban international school), to a community of over 1,000 subscribers on a YouTube channel (a boy from Cohort 2, English medium urban government school), as well as building a community to talk about their passions. 10 percent of the parents (4) agreed that being online had helped their children build a community and/or circles of friends that would not have otherwise been possible offline (refer to Figure A7:2 in Annexure 7 for more details). The teachers were oblivious to this.

> *"I am really passionate about the responsible usage of antibiotics and antimicrobial resistance. I created an Instagram account, along with a classmate of mine, to promote awareness on this. I submitted this initiative as a project to the University of Manchester. I also used Facebook and X to reach a wider audience."* (Boy, Cohort 3, Class 9, urban international school)

Besides this, children from Cohorts 1 and 2 spoke of their online connections, including strangers and online friends, which included individuals from other cities or countries. Children view these online connections as a means to stay connected with the world, and learn about other cultures. 10 percent of parents (4) also felt that being online was a means for children to gain exposure, and also opened a gateway to building relationships with people from other cultures and countries (refer to Figure A7:2 in Annexure 7 for more details).

> *"People outside of the country follow me, and I follow them, too. Following them back allows me to see what is happening in their countries and surroundings."* (Boy, Cohort 2, Class 8, English medium urban government school)

Boys from the learning centre for CWDN and the urban private school were introduced to online friends through online gaming. Two boys shared that they had previously met these friends once or twice. Some children were cautious of befriending people online.

It is quite evident that building online communities for a specific purpose was not very prominent amongst the children in this study. It is interesting to note that the children from the English medium urban government school; the urban private school (mainly Cohorts 1 and 2) and the learning centre for CWDN (Groups 1 and 2) are actively involved in making online friends, who, for the most part, are individuals they have not met offline.

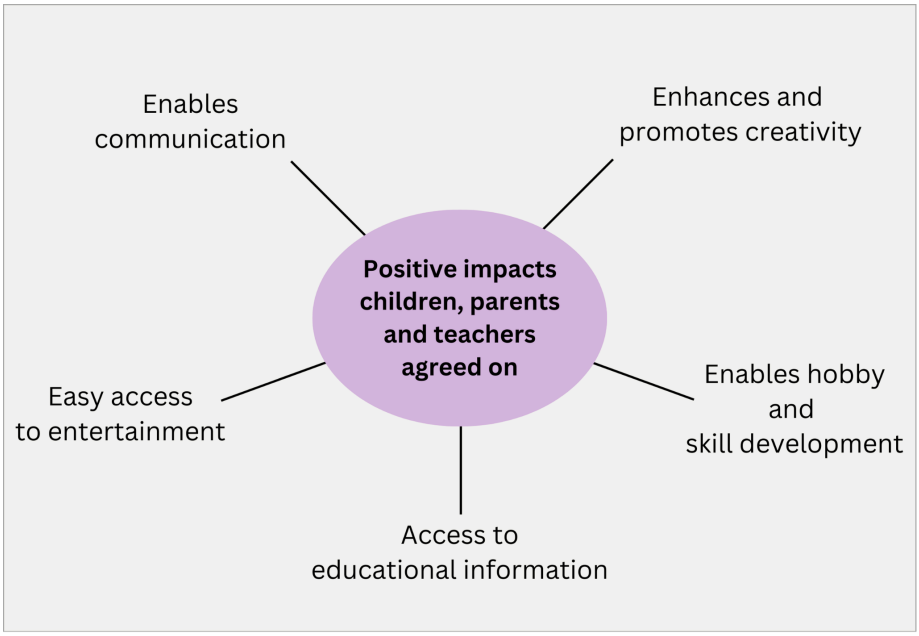
> *"My father told me not to accept online requests because my account may get hacked."* (Boy, Group 1, learning centre for CWDN)

Positive Impacts

Children shared a number of positive impacts that emerged from their online engagement. The teachers and parents were in agreement with some of these. The many reasons the children articulated for going online (presented in Section 6) have been elaborated upon in this section as positive impacts. Out of 57 parents, 28 percent (16) stated that the impacts of digital engagement on their children had been 'mainly positive', and 44 percent (25) said that it had been 'both positive and negative'. Figure A7:1 in Annexure 7 provides more details on this. 72 percent (41) of parents shared the positive impacts that they had observed in their children. Details of the parents' responses on the positive impacts of online engagement on their children can be viewed in Figure A7:2 in Annexure 7.

Positive Impacts Children, Parents and Teachers Agreed on

Figure 9: Positive impacts children, parents and teachers agreed on



This figure shows the common themes that emerged out of the responses shared by the children, parents and teachers. These are discussed in detail below.

Enables communication

Children and teachers across the board stated that being online served as a means to communicate and even become closer to their parents, friends and extended family living in different states and countries. A child from Cohort 3 added that online engagement enables offline communication - children discuss what they have encountered online with their friends offline. 10 percent of parents (4) also felt that the online world serves as a means of getting in touch with many people at once.

Enhances and promotes creativity and self-expression

Children from Cohorts 1, 2 and 3 felt that being online had allowed them to explore their creative interests, like creative writing and storytelling, which a Cohort 1 teacher agreed with.

> *"I acquired creative skills from being online. I read many old stories on my devices. Now, I have learned to write my own stories. Last year, I wrote a story, and developed it into a play with my classmates. My class teacher and headmaster saw it and liked it. After that, they encouraged me to put up a show on stage."* (Boy, Cohort 1, Class 6, rural government school)

A girl from Cohort 3 (urban international school) discovered her newfound interest in knitting and sewing, by watching YouTube videos. Children (mostly girls from government schools) felt that they could express themselves and their creativity through Instagram reels and posts, which showcased their dancing and video editing skills. 29 percent of parents (12) agreed that children expressed their creativity through online platforms. A teacher from Cohort 3 added that children have used AI to their advantage and have learned to create wonderfully edited and designed documentaries.

Enables hobby and skill development

Children and teachers agreed that online resources had facilitated their interest and passion in photography, videography and video editing. Children from Cohorts 2 and 3 shared that they had learned to research effectively. Teachers from Cohort 3 agreed with this. Given the abundance of information online, researching, and being able to find the required answers from credible sources is a skillset that is useful. A girl from Cohort 2 added that she had familiarised herself with social media marketing by promoting her online business.

Children shed light on the other hobbies they had picked up, like dancing, cooking, crafting and acting. They had also developed and built on skills like drawing, coding and typing; and sports skills, by watching videos and games, and using apps to analyse sports moves. Some children from Cohort 1 shared that online engagement had developed their ability to think on the spot and gain an eye for detail. Children from Cohort 3 (urban private school) have learned many hacks from videos online, which they use in their daily lives. 44 percent of the parents (18) felt that being online has given children the access to develop skills that would be useful currently, and in the future.

Access to educational information

Children from Cohorts 1, 2 and 3, and Group 2 (learning centre for CWDN) shared that their online engagement had allowed them to access educational information, which had in some

ways improved their academic performance. It helps them execute their projects creatively; gives them access to information that is easily comprehensible and uses novel teaching methodologies; helps prepare class notes (especially children from government schools); and gives them access to information beyond the classroom. The teachers also reiterated these.

> *"It helps me access information teachers often cannot give."* (Girl, Cohort 1, Class 6, Kannada medium urban government school)

Children and teachers from the urban international and urban private schools also added that EdTech platforms like Mindspark have improved their performance in Mathematics. Growing research in the field of EdTech shows that it has the potential to positively impact children's learning, owing to personalised lesson plans, allowing students to receive constructive feedback on their performance (Tzenios, 2020). Children from the English medium urban government and urban international schools shared they had formed online study groups, which helped improve their academic performance. 51 percent of the parents (41) felt that children's online engagement had improved their academic performance, and 54 percent (22) felt that the vast repository of information online had given children access to very useful information. A teacher from Cohort 3 (urban international school) agreed with this.

Children added that being online has given them access to free educational resources, tuition lessons and has helped address their academic questions, especially when they have missed school (this was especially common in children from the government schools).

The teachers went on to add that this influx of information had made students independent and empowered learners, with a thirst for knowledge. This was also seen in Groups 1 and 2 from the learning centre for CWDN, which has contributed to students' improved attention in class (Group 1), and peer learning in Group 2. A teacher from Cohort 2 (urban private school) shared that her students had begun to ask more *'why'* questions, which motivated her to change her manner of teaching. Another teacher felt that students' online exposure had made her job slightly easier.

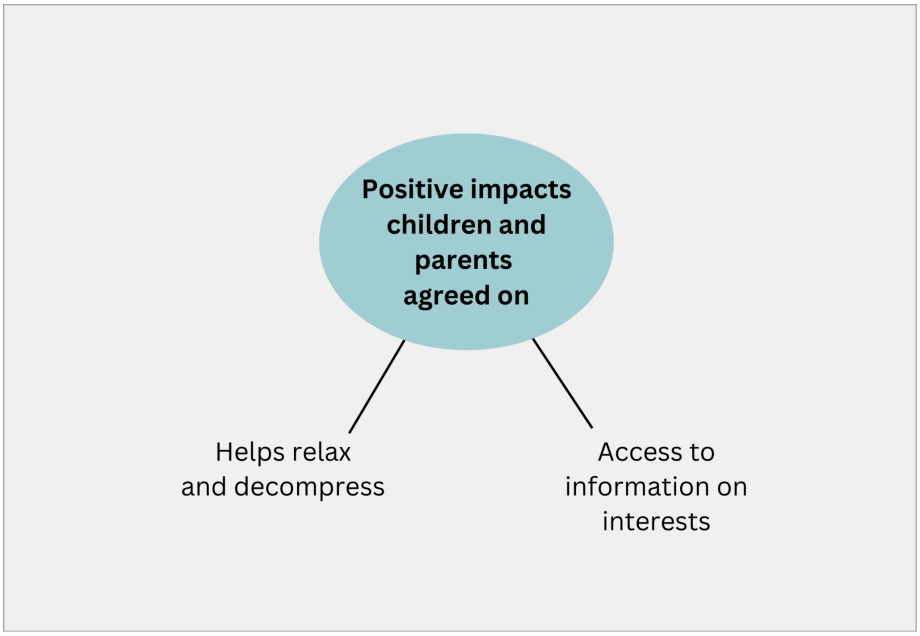
"Many students play Minecraft. When I teach Geography, I feel that I don't have to put in too much effort, because the students have already learnt so much through this game. For example, they've learned so much about different types of stones." (Teacher, Cohort 2, Class 8, English medium urban government school)

Easy access to entertainment

Children stated that going online served as an easy source of entertainment, especially when they were alone at home. Parents (24% - 10) and teachers (Cohort 3) agreed with this.

Positive Impacts Children and Parents Agreed on

Figure 10: Positive impacts children and parents agreed on



Children and parents agreed on two additional positive impacts, which are elaborated on below.

Helps relax and decompress

Children felt that being online helped them relax, refresh their minds, relieve stress and made them feel happy. 39 percent of the parents (16) agreed that being online made their children happy. Boys from the learning centre for CWDN (Group 2) shared that their online engagement helped them calm down when they were angry.

Children elaborated on the ways in which playing games had positively benefited their sense of self and well-being. Children from the rural and urban government schools (Cohort 1) shared that they felt **cool** and experienced a sense of **happiness** and **pride** when faring well in games. Children across all cohorts felt good when their friends congratulated them on a high score. For some boys from the learning centre for CWDN (Group 1) and urban international school, gaming evoked feelings of **nostalgia** and happiness. Scoring well in games was seldom linked to one's sense of self and popularity, except in the case of a few boys from the Kannada medium urban government school (Cohort 3).

Allows access to information on interests

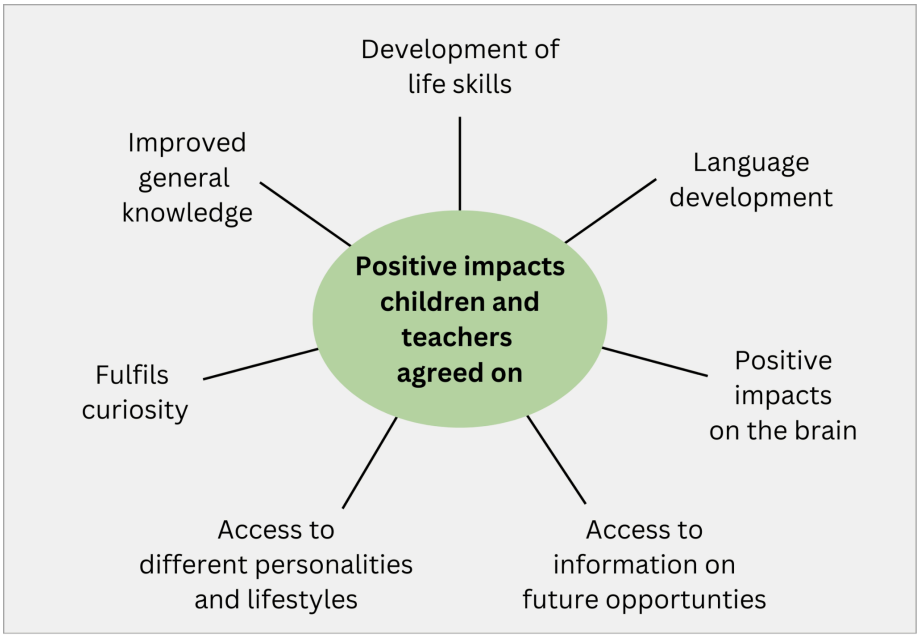
Children leverage online resources to gain access to more information on their interests, such as computer science workshops, learning about e-commerce and animals, reading and trying out recipes, and taking up online courses on editing and marketing. 44 percent of the parents (18) agreed with this. A girl from Cohort 3 (urban international school) shared that online resources helped her make an informed decision to become vegan. It also serves as a means to reach spaces that are hard to access offline and helped access opportunities related to children's interests.

> *"In India, theatre is not amazing, compared to Western theatre. I sent a message to the Manhattan Theatre Club on Instagram, because I wanted some help with a play that I was putting up. I got a response, and it helped to hear from a professional."* (Girl, Cohort 2, Class 8, urban international school)
>
> *"Through an online contact, I got a chance to be a ball boy at the Kanteerava Stadium."* (Boy, Cohort 2, Class 8, urban private school)

Three parents from the learning centre for CWDN stated that being online had enabled inclusion and the opportunity to pursue interests that would not have otherwise been possible (refer to Figure A7:3 in Annexure 7 for more details). These were not mentioned by the children or teachers. Teachers from the learning centre for CWDN shared that they create an environment to eliminate a sense of 'otherness' in school. Therefore, children do not feel that they are 'different' from others.

Positive Impacts Children and Teachers Agreed on

Figure 11: Positive impacts children and teachers agreed on



Development of life skills

Children shared that being online had helped them build confidence, communicate effectively, improve their critical thinking, and their ability to form their own opinions. The teachers agreed with this. A teacher from Cohort 3 shared that online school during COVID had helped children build on their confidence, which continued into offline school, as well. Teachers from Cohort 2 and Group 1 (learning centre for CWDN) added that students had built on their problem solving and decision-making skills.

Children felt that being online had helped enhance their public speaking abilities, improvisation skills, and enabled emotional development by building empathy and understanding, through the exposure to different perspectives and people online. Children from Cohort 1 (urban private school) spoke of the role of games in this regard. This quote reveals very heartfelt insights.

> *"Characters in Roblox help each other, and that influences us to be helpful to our friends."* (Boy, Cohort 1, Class 6, urban private school)

Language development

Online engagement has enabled children to build on their vocabulary, learn new languages through applications like Duolingo, and improve their comprehension skills. Teachers from Cohorts 1 and 2, and Group 2 (learning centre for CWDN) agreed with this. Many children from government schools stated that they had learned how to pronounce words better, with the help of Google.

Positive impacts on the brain

Children and teachers from Cohort 1 shared that being online sharpens the brain, leading to its development. Children also felt that coding was good for the brain. Current research reveals that coding at a young age can promote cognitive functioning in children (Arfé et al., 2019).

Access to information on future opportunities

Children from Cohort 1, 2 and 3, and Group 2 (learning centre for CWDN) shared that being online had introduced them to avenues and information that would be useful for the future. These included career ideas and job opportunities, gaining an in-depth understanding of a particular career path, and information on colleges and their courses. A teacher from Cohort 3 agreed with this.

> *"I had a lot of reels on architecture on my feed, and now it's something I want to pursue."* (Girl, Cohort 2, Class, 8 urban international school)
>
> *"I have learnt about different types of jobs that I can do by connecting with people on LinkedIn. I have even applied to some."* (Boy, Group 2, learning centre for CWDN)

Access to different kinds of people and lifestyles

For many children, especially children from government schools, being online is a means for them to vicariously experience different lifestyles. This was also pointed out by a few boys from the learning centre for CWDN (Group 2). A teacher from Cohort 3 added that being online enabled children to subconsciously learn about different societies and cultures.

> *"Shah Rukh Khan is my role model. Going online gives me access to him, and I get to know what he is doing."* (Boy, Group 2, learning centre for CWDN)
>
> *"I like to watch how people live. I feel like I am living that life, even though I am not actually living it."* (Boy, Group 2, learning centre for CWDN)

Boys across the board shared that being online gave them access to the content produced by self-improvement gurus, which have been especially useful for them.

Fulfils curiosity

Children felt that being online fulfilled their curiosity, whether it was to retrieve information, or know what people are doing. A teacher from the learning centre for CWDN (Group 1) agreed with this.

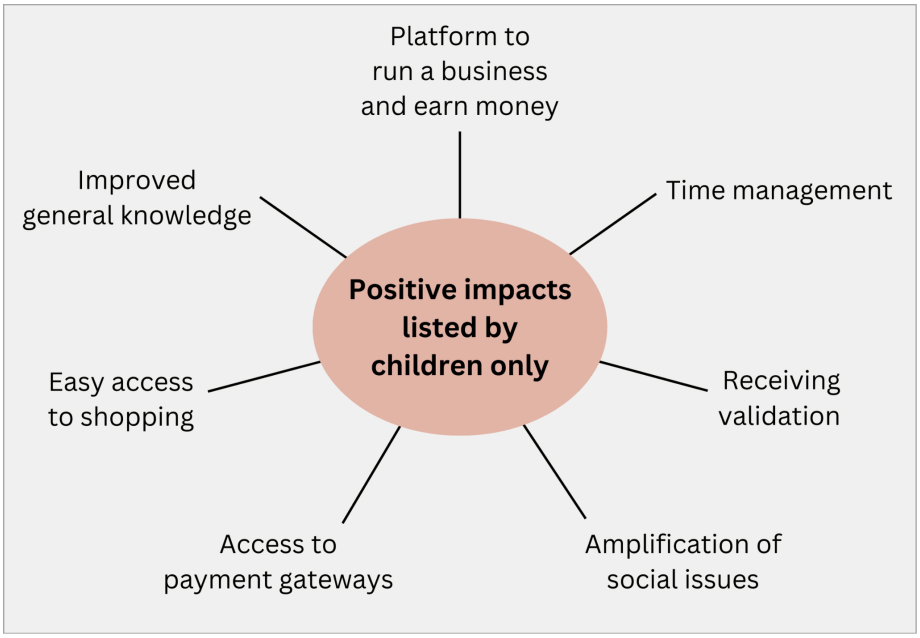
Improved general knowledge and knowledge of social issues

Children and teachers from Cohorts 2 and 3 felt that websites and social media had given children access to general knowledge and current affairs, including social issues that are not covered in mainstream media. A girl from Cohort 3 added that some games also develop general knowledge and help build a better world view.

Positive Impacts listed by Children Only

The children listed and identified far more ways in which their online engagement has been beneficial to them as compared to teachers and parents. These are elaborated below.

Figure 12: Positive impacts listed by children only



Platforms to run a business and earn money

A girl from Cohort 2 (urban international school) shared that being online had enabled her to build a business and earn money, which would not have been as successful offline. A boy from Cohort 3 (Kannada medium urban government school) stated that he sometimes earns money online through trading.

Enables accountability and time management

Children explained that using the online space, with the help of friends or applications, enabled them to do their work and manage their online time.

Receiving validation

Girls from Cohorts 1 and 2 feel a sense of validation when uploading posts on social media.

> *"Social media is a platform for me to showcase my talents, which makes me feel validated."* (Girl, Cohort 1, Class 6, rural government school)

Amplification of social issues

A girl from Cohort 3 (urban international school) felt that social media helped amplify messages on social issues, and felt that by doing so, she could make a difference to the world.

Access to payment gateways

Children from Cohorts 1, 2 and 3 (rural and urban government schools) spoke of how payment portals were beneficial to them. For children from the urban international school (Cohort 2), such portals helped them travel around the city. Children from government schools shared that these portals helped them buy groceries for their families.

Easy access to shopping

Children found it beneficial to have shopping apps, including ones that were more affordable.

Enhanced knowledge on online safety

A boy from Cohort 1 (rural government school) stated that through social media, he has learned tips on how to be safe online.

Negative Impacts

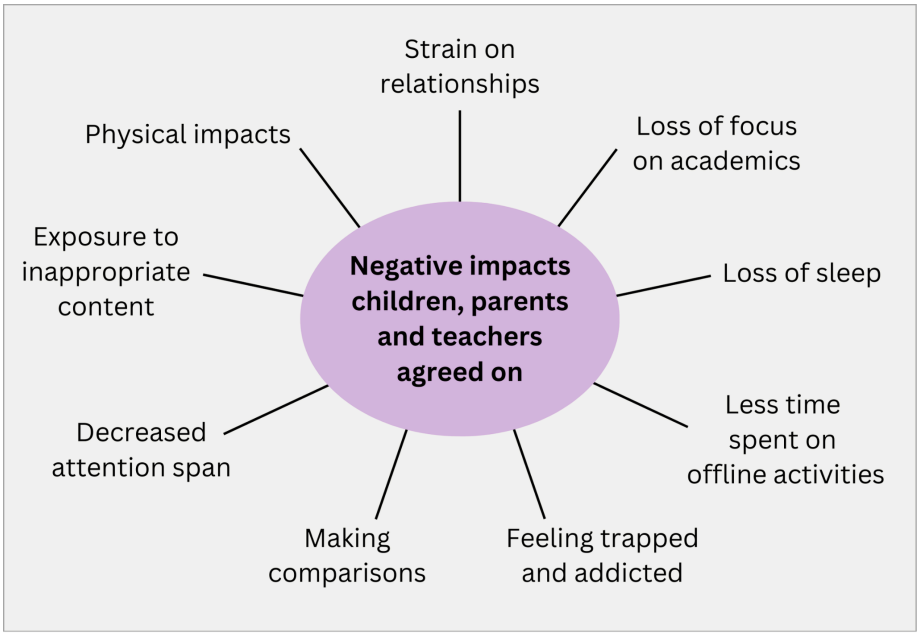
The children were quick to identify and share the negative impacts of digital engagement. The teachers and parents added on to these.

Out of the 57 parents, 9 percent (5) said that the impacts of digital engagement on their children had been 'mainly negative', and 44 percent (25) said that it had been 'both positive and negative' (refer to Figure A7:1 in Annexure 7 for more details). 53 percent of parents (30) shared the negative impacts that they had observed in their children. Details of the

parents' responses on the negative impacts of online engagement on their children can be viewed in Figure A7:4 in Annexure 7.

Negative Impacts Children, Parents and Teachers[24] Agreed on

Figure 13: Negative impacts children, parents and teachers agreed on



Strain on relationships

Children admitted that their online engagement had strained their relationships with family members and friends. Children expressed that they often fought with their parents and siblings regarding their online time. Parents observed that children wanted to be left alone without being monitored (23% - 7), children did not want to be monitored on their online time (23% - 7), and some children felt angry and quarrelsome about being monitored (20% - 6). The teachers shared similar accounts, based on the complaints they had received from the parents.

Children from Cohorts 2 and 3 felt that social media had instigated the formation of groups, which then led to experiences of exclusion. According to the teachers, these groups are formed based on who uses social media, and who does not.

[24] Cohort 1 teachers from the urban international and urban private schools did not share any negative impacts, stating that they were unaware of the same.

"It is easy to feel ostracised, and social media makes it worse." (Girl, Cohort 3, Class 9, urban international school)

Some children (mainly children from the English medium urban government school) shared that they would prefer to spend time on a device,[25] as opposed to spending time with people, and some even mentioned wanting to go online without any interruptions. A few of them held that they tend to use their phones, even when they are spending time with their friends. Teachers' observations reveal that children seem to be connected on social media, but disconnected offline, leading to them isolating themselves. One parent felt that their child spent too long chatting with friends online.

"I prefer being online on a device, as opposed to spending time with people, because my device meets my expectations, and my interactions with people offline make me unhappy." (Two girls, Cohort 3, Class 9, English medium urban government school)

Parents (43% - 13) shared that their children preferred to be on a device, rather than communicate with their family in person. 10 percent of the parents (3) also felt that their children had become sulky and withdrawn; and one parent shared that their child was unable to make new friends offline.

Teachers had additional concerns regarding the student-teacher relationship. Teachers from Cohorts 2 and 3 felt that there was a disconnect between them and the students. They felt confused about their role, because children seemed to be getting their questions answered online, which was not the case earlier. They also felt that students had become inattentive to what they taught and were unsure of how to re-engage them. Perhaps this can be addressed with the help of a quote shared by a teacher from Cohort 2.

"The role of the teacher has changed due to easy access. It is not just about imparting information, it has to be an experience which may not come from online engagement. Teachers need to reshape themselves and their concepts. Pedagogy has to be changed. Teachers need to reinvent themselves to remain relevant." (Teacher, Cohort 2, Class 8, urban international school)

[25] One girl mentioned that she came from a troubled household, and this could have been the reason for her statement. For her, being online could be a means of escape.

Loss of focus on academics

Some children found their devices to be distracting while studying, which defocused them. Others shared that they did not see the point in studying, after having read about many successful personalities who got poor grades or dropped out of school. This resonated with teachers, especially from Cohort 3.

Teachers across the board had much more to share on how online engagement had impacted students. They felt that students were not doing their homework as promptly anymore, and seemed to be reading their textbooks less. Teachers from Cohorts 2 and 3 stated that there was a growing reliance on ChatGPT to complete students' assignments, which was a matter of concern for them. Additionally, students who performed well in class did not perform well in exams, possibly due to being caught up with their devices. Some children do not concentrate in class (which could be due to sleep deprivation), which then affects their retention of information. A teacher from the learning centre for CWDN (Group 2) expressed concern for her students in terms of their performance in board exams, higher education, and becoming employable.

Quite evidently, teachers seem to have noticed far more negative impacts in children, in relation to their academics. 43 percent of the parents (13) agreed with this.

Loss of sleep

Several children across the board felt that being online had led them to sleep less. Some even mentioned waking up in the middle of the night to check their phones. Children from government schools shared that this was often a reality for them. One of the reasons for this could be that this is the only time when they can go online without interruptions from their parents or siblings.

> *"Once, I was online and I did not get sleep till 5 am, and then the next day, I could not go to school."* (Boy, Cohort 1, Class 6, rural government school)

10 percent of the parents (3) stated that being online had affected children's sleep cycle. Teachers agreed that phone usage at night had led to sleep deprivation, which was evident from the students' lack of focus and concentration in class.

Less time spent on offline activities

Children, especially from Cohort 3, felt that they were spending less time on offline activities. Teachers and parents (7% - 2) agreed with this.

"If it were not for English Literature, I would not be reading." (Boy, Cohort 3, Class 9, urban international school)

Feeling trapped and addicted

Children hesitantly expressed feeling **out of control** and **sucked in** when spending time online. A few students from Cohorts 1 and 3 went so far as to say that they were addicted to their devices. Their responses expressed a general tone of helplessness. Students from Cohort 2 shared that they go online with the intent of doing homework, but eventually end up doing other things, like watching YouTube or scrolling through social media. This was mentioned by the teachers as well.

"When the child is online, there are too many things competing for the child's attention." (Teacher, Cohort 2, Class 8, urban international school)

30 percent of the parents (9) felt that their children were showing signs of digital addiction. Mothers added their thoughts on their children's digital engagement.

"My child does not listen to me. He needs a device even while eating. His reading has reduced." (Mother of a child in Cohort 3, Class 9, rural government school)

"My child wants to spend more time on online gaming. He rushes to complete his educational tasks first so that he can do this." (Mother of a child in Cohort 1, Class 5, urban international school)

A teacher from the learning centre for CWDN (Group 2) shared that she was concerned about her students, as she felt that they did not know when to stop their online engagement.

Making comparisons between oneself and what is seen online

Children from Cohorts 1, 2 and 3 shared that they often compare themselves to what they see online. One parent (3%) noticed this in their child, as well. A heartfelt outpouring in the form of a series of unconnected statements from a boy in Cohort 1 also indicates the evidence of **emotional disequilibrium**.

> *"I feel happy and angry at the same time because I cannot be like these other people whom I see online. I hate myself. I have no emotions. I don't know how to describe how I am feeling. I am sad and lonely because I don't have siblings. I feel very, very, very, very bad when something inappropriate pops up."* (Boy, Cohort 1, Class 5, urban international school)

Children from the rural government school (Cohort 1) expressed a desire to be like the people online and have the same possessions as them. However, these aspirations could not be realised due to the socio-economic background these children come from.

Girls from Cohorts 2 and 3 often made **comparisons** between their accomplishments, and those of the people they see online. Their 'lack' of accomplishments, despite being the same age, or having the same or more resources, left them feeling **inadequate**. They also feel a sense of **jealousy** when they see how other people live their lives, despite knowing that people usually post the best parts of their lives on social media.

Comparisons often lead to **body image issues**. Children from Cohorts 1 and 2 (mainly girls) shared their experiences of body image issues. They felt that they did not look as 'good' as the people they saw online, or that they did not fit into the ideal standard of beauty. This was an observation made by the teachers of Cohorts 2 and 3 as well. A teacher from the learning centre for CWDN (Group 2) worried that her students compared themselves to people online, but this was not expressed by the students.

> *"We experience a sense of inadequacy when we cannot replicate the bodies of the people we see online, and we feel demotivated when we see other people succeeding online."* (Girl, Cohort 1, Class 8, urban international school)

Parents (13% - 4) felt that their children were experiencing a sense of inadequacy in terms of their personal achievements, personal lifestyle and physical appearance. It is possible that such feelings also lead children to experience such things for themselves. For instance, one parent shared that their child felt the need to keep up with trends seen online, and a few parents (13% - 4) felt that their children felt the need to eat and drink what they had seen online.

Decreased attention span

Children felt that being online had taken a toll on their attention span and focus, which teachers and parents (33% - 10) across the board resonated with. Cohort 3 teachers were of the opinion that students' attention span depended on how children were being engaged.

Exposure to inappropriate content

Children from Cohorts 1 and 2 and Group 2 (learning centre for CWDN) had been exposed to some form of inappropriate content, in the form of pornography; violence; scary movies; being flashed by people online; and scientific visuals that they were not ready for. 20 percent of the parents (6) agreed with this. The teachers made similar points. Children at the learning centre for CWDN (Group 2) added that they had seen abusive words in the chat box while gaming, which, according to the teachers, may have contributed to the children using such language more boldly. Some children were hesitant to talk about what they had seen, but based on their expressions and body language, it was evident that they had encountered age-inappropriate content.

> *"I don't want to say it, but it starts with an 's'."* (Boy, Cohort 1, Class 5, urban international school)

Adolescents went on to add that inappropriate content featured on their feed frequently, which made them feel uneasy. The teachers agreed with this, and also stated that such content can trigger children who are going through mental health issues. A teacher from Cohort 2 (English medium urban government school) stated that in some cases, it was the students themselves who were sending inappropriate content to their classmates.

Physical impacts

Adolescents across cohorts almost immediately spoke about the physical impacts they had experienced from being online. According to them, being online dulls and damages the brain; leads to failing eyesight; causes eye pain, eye flu and headaches;hand pain, and hand tremors. Some children had experienced fatigue; weight gain; restlessness; sweating; and stress when playing a game or watching a horror movie. One boy from Cohort 3 shared that being online left him feeling exhausted, and boys from the learning centre for CWDN (Group 2) made references to explain what they felt.

> *"I end up with no energy for any physical activity, I feel like a zombie."* (Boy, Cohort 3, Class 9, urban international school)
>
> *"My head bursts like popcorn when I am online too much."* (Boy, Group 2, learning centre for CWDN)
>
> *"I feel like being online does not just create pressure, it is actually a pressure cooker."* (Boy, Group 2, learning centre for CWDN)

These quotes indicate that these physical impacts were visceral in nature. The teachers stated that being online can be overwhelming and overstimulating for children. One of the parents felt that being online had made it difficult for their child to maintain eye contact.

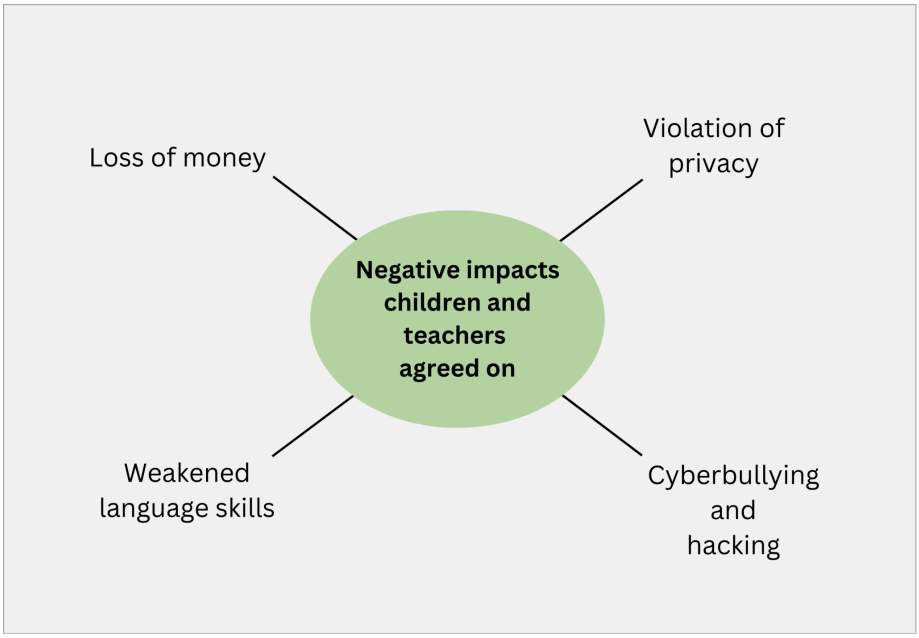
Negative Impacts Children and Parents Agreed on

Contact from strangers

Children from Cohorts 1 and 2 (English medium urban government school) shared accounts of when they had been contacted by strangers online. One parent mentioned this as well. Even though the children found these situations pleasant, they took measures to address it, such as ignoring the messages and blocking the sender.

Negative Impacts Children and Teachers Agreed on

Figure 14: Negative impacts children and teachers agreed on



Loss of money

Students from government schools recalled losing money while playing online games. A teacher from the English medium urban government school (Cohort 3) felt this to be true, with students spending large sums of money on games like Free Fire, without their parents' knowledge.

Violation of privacy

A girl from Cohort 3 (urban international school) recalled an unpleasant incident when the pictures that she had posted on social media were circulated online without her

permission. Some teachers were of the opinion that being online encroached users' privacy.

Cyberbullying and hacking

Children from Cohorts 1 and 2 mentioned a few instances of cyberbullying. A girl from Cohort 3 (urban international school) shared her experience of cyberbullying from when she was younger, involving the spread of false rumours about her, which led her to question her own existence.

Children from the Cohort 1 and the learning centre for CWDN (Groups 1 and 2) stated that they had experienced cyberbullying and hacking, and in some cases, did the hacking. They did not seem to recognise that what they were doing could be wrong. Their teachers felt the same way.

> *"I was playing a game where someone sent me abusive words in the chat box. I hacked this person's account, and also sent the same messages back to them."* (Boy, Group 2, learning centre for CWDN)

Cyberbullying was a matter of concern for teachers from Cohorts 1, 2 and 3, as well. They felt that their students perpetuated much of it, because they do not realise where to draw the line when having fun, and may end up bullying someone online.

> *"Online bullying is a matter of concern because there is not much room to supervise this. Children may not talk about their adverse online experiences. Until Class 6, they spoke to teachers about it, but now, they sort it out themselves, which can be both positive and negative."* (Teacher, Cohort 3, Class 9, urban international school)

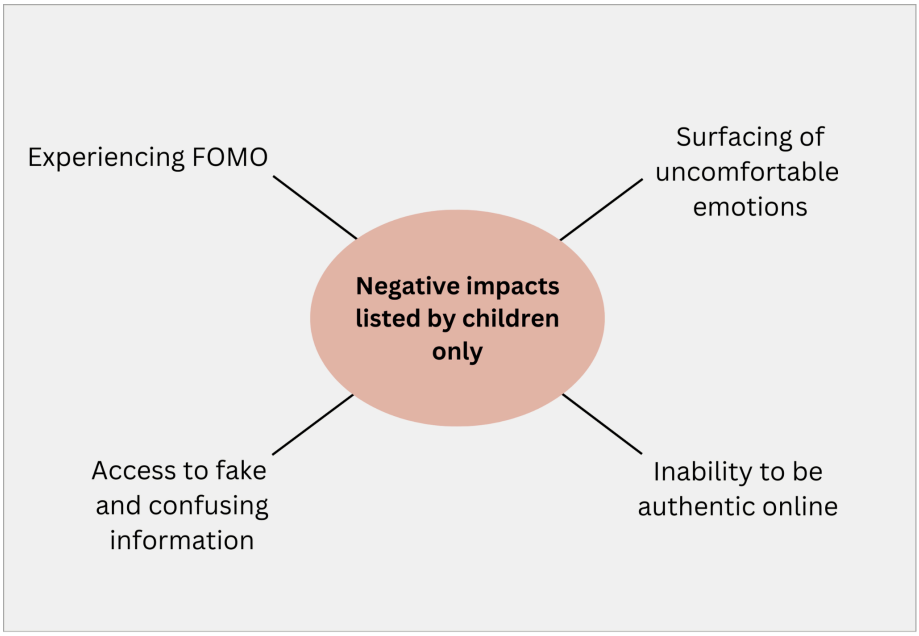
Weakened language skills

A boy from the learning centre for CWDN (Group 1) stated he seemed to be forgetting words and how to write, due to the binary language of coding. Teachers from Cohort 3 felt their children's language skills had declined. They observed that their students were having trouble putting their thoughts into words and had developed an aversion to writing.

Negative Impacts Listed by Children Only

In addition to the negative impacts listed above, children had a few more to share.

Figure 15: Negative impacts listed by children only



Experiencing the fear of missing out (FOMO)

Children from Cohorts 1 and 2 experienced **FOMO**, which led them to be online more than they wanted to be.

Surfacing of uncomfortable emotions

The girls from Cohort 2 and 3 were not very bothered by their gaming scores (probably because only a limited number of them played games), but this was not the case with the boys. **Gaming** for these boys engendered a **high sense of competition**, and feelings of **anger** and **loss** in response to obtaining low scores. At times, children from Cohort 3 felt bored after playing games for too long, which left them feeling **low**.

Children feel a sense of **instant gratification** (Cohorts 1, 2 and 3) when they are online, but prolonged usage, especially the consumption of content they find inconsequential (mindless scrolling), makes them feel **guilty** and **unproductive**. Children shared that doing productive work (like academics) online makes them feel satisfied with their online time.

Children from Cohort 1 felt **agitated**, **unrelaxed** and **impatient** in the offline world - they are used to things happening fast online and adjusting to the same offline seems to be a challenge for them.

Children in Cohort 2 from the Kannada medium urban government and urban international schools stated that receiving validation and likes online were important to them. Not receiving these leaves them feeling **demotivated** and **disappointed**.

Inability to be authentic online

Some children worry about how they are **perceived online**. This leads to them being **inauthentic** on social media.

> *"I am unable to express myself properly on social media. I feel a lot of pressure to conform to what other people are saying online."* (Girl, Cohort 2, Class 8, urban international school)

Only two boys from the learning centre for CWDN (Group 1) felt the pressure to be like their peers, but others did not feel so.

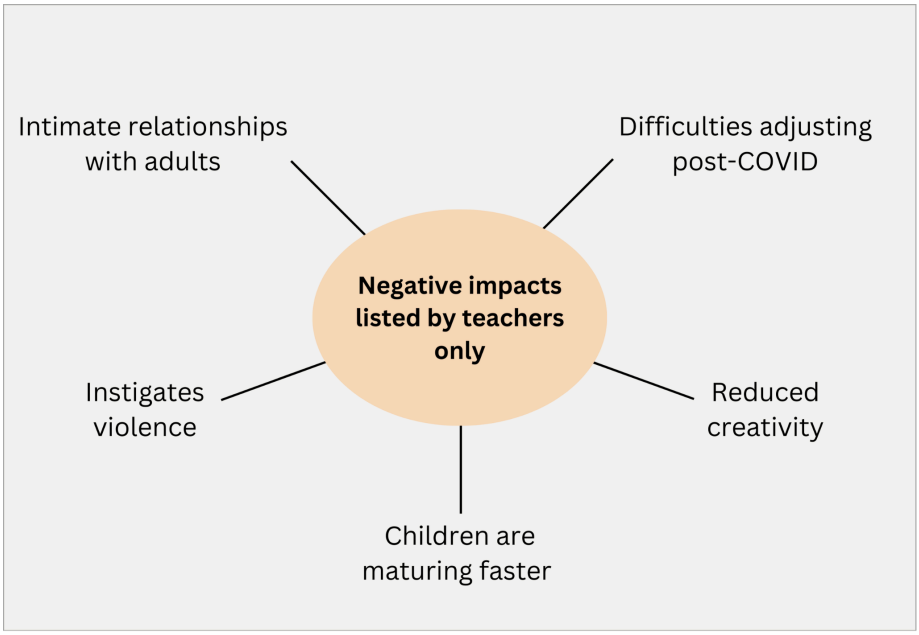
Access to fake and confusing information

Children from Cohort 2 felt that there was fake information online, which they did not like. A boy from Cohort 3 felt that there was too much information online. It confused him to hear different people saying different things.

Negative Impacts listed by Teachers Only

Teachers had much more to add to the list of negative impacts of online engagement, as compared to children. Their understanding of classroom behaviour may have contributed to this. They also shared anecdotes, which the adolescents may have been hesitant to share during the PAR and FGD sessions. They were much more ready to talk about the negative impacts, as opposed to the positive impacts. Their additional inputs are elaborated as follows.

Figure 16: Negative impacts listed by teachers only



Intimate relationships with adults

Teachers from Cohorts 2 and 3 from the urban government schools shared that girls and boys were entering relationships which the parents were not aware of. One teacher from Cohort 3 shared accounts of some of the girls in her class who were interacting with older men online. Some of these interactions resulted in a romantic relationship. The teacher worried for the girls' mental health and self-esteem, and wished for them to build on their self-esteem, outside of the validation of older men.

Difficulties adjusting to school post-COVID

Teachers from the rural government school (Cohort 2) and learning centre for CWDN (Group 2) found some students were having trouble adjusting to offline school post-COVID. It took about a year to get used to not having online school, and some students from the rural government school were still adjusting to this change.

Reduced creativity

A teacher from Cohort 1 (English medium urban government school) opined that online engagement had curtailed children's creativity. When doing projects, children seemed to be copying what they saw online. She felt that they lacked originality. The teacher believed that her students were capable of doing more, but the internet had put a limit to their creativity.

Children are maturing faster

Teachers from Cohorts 1, 2 and 3 felt that their students were maturing too fast, owing to the availability of all kinds of information online. Children were learning things much

earlier, as compared to the previous batches of students that they had encountered.

Instigates violence

A teacher from Cohort 1 (Kannada medium urban government school) felt that playing online games were making children more violent.[26]

> *"When they play killing games like PUBG, they feel like they can do the same in real life as well."* (Teacher, Cohort 1, Class 6, English medium urban government school)

Key Takeaways

This section encapsulates the pushes and pulls the children experience while engaging with the digital world. The positive and the negative impacts can be viewed as two sides of a coin. Some telling examples are: digital engagement has enhanced creativity for some children, and destroyed it for others; it has evidently enhanced academic performance for some; and adversely affected it for others. Sometimes, it even does both for the same child.

This reveals that digital engagement has the potential to impact the children both positively and negatively. It is a platform that does not discriminate in terms of what it has to offer. Children from various socio-economic backgrounds and children with diverse learning needs view the online word as a space that allows their growth and development, and creatively find ways to maximise that. This includes going online to help with academics, building on hobbies, staying connected with the world, learning about niche interests, and many more. There seemed to be a higher level of agreement between the three stakeholders on the positive impacts. Teachers and parents, though aware of the positive impacts, did not capture it with the same essence and zeal with which the children spelled it out. This is visually represented in Annexure 4. Authentic sharing, respectful and active listening between children, parents and teachers, with an interest in understanding the perspectives of children can help bridge this gap.

Several negative impacts emerged as well. The students displayed a high sense of self-awareness in noticing and understanding how their digital engagement had poorly affected them. These included experiences of distraction, and strain on relationships, among others. It is interesting to note how a negative impact (e.g., loss of sleep) could be the same for children from different socio-economic backgrounds, but for very different

[26] A general observation from school visits was that there is violence that prevails amongst children. Reasons for this could be many, such as their household environments, and not just the exposure to violent games.

reasons. Children from a privileged background sleep less because they have uncontrolled access to their many digital devices (a luxury). Children from government schools get access to the phone only at night, and also sleep less because it is used by other family members during the day (socio-economic challenges).

Interestingly, the teachers captured the negative impacts in much more detail. The parents did not have an in-depth understanding of the negative impacts of digital engagement on their children. It is a matter of concern that parents were somewhat unaware of a number of experiences shared by children and teachers, such as their tendency to make comparisons, leading to body image issues, and having online relationships with adults. It is important for parents to see past just the behavioural impacts of online engagement, and also focus on the emotions and feelings of the child. Once again, open communication can enable this. Children share authentically when they feel safe.

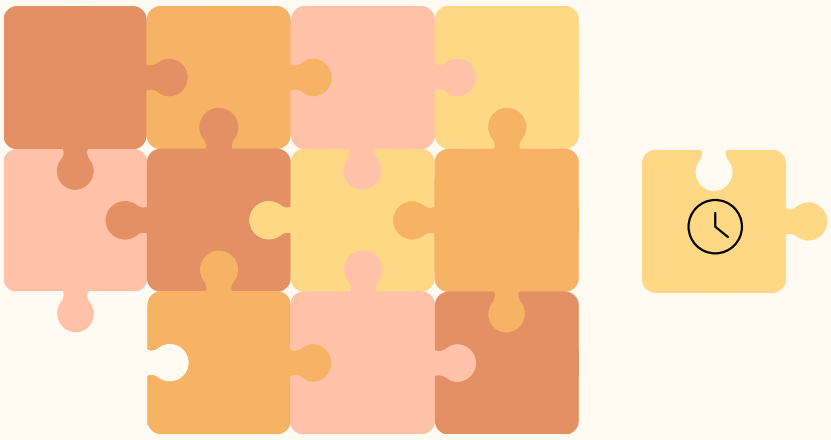
The powerful role played by social media in building extensive but shaky relationships and simultaneously creating exclusion is potently evident. This study indicates how digital communication can create a false sense of connectedness and in reality, cause alienation in the offline world. There is also evidence that the online world presents information in an incomplete and sometimes a contextual manner, which the children are unable to decode. This can influence their attitudes and behaviour adversely.

With regard to children's experiences of body image issues, a mere exposure on online safety would not suffice in addressing such topics. In such cases, life skills education, focused on empowering children and building their self-esteem can minimise such impacts on children.

Children and teachers referred to cyberbullying, and how sometimes, children with diverse needs may be unaware of when they are participating in it. The digital world has its own codes and norms, which both parents and children could be unaware of. It is important to build a curriculum for students that caters to different kinds of learners. There is the need for mentoring and guidance for all stakeholders to navigate this new world.

With the exposure to the digital world, the teachers felt that their role in students' lives had become less consequential, but it would be beneficial, as some teachers mentioned, to acknowledge the role the online world plays in students' lives and adopt innovative ways to give children what technology cannot. This is an important realisation.

The children's quotes in this section are simultaneously poignant, touching, heart-warming, and even a matter of grave concern. There are mixed feelings rife with confusion. They are aware of how they are being affected, but many could not seem to find ways to help themselves. Thus, they seem to be trapped in a vicious cycle. The children clearly need mentoring and support to help them navigate this world to amplify the healthy outcomes. The role of adult stakeholders in creating safe spaces for these children where ideas, feelings and experiences can be shared respectfully, without fear of judgement or punishment would potentially go a long way. The issue at hand is clearly not one of a complete lack of awareness by all the stakeholders, it is more one of helplessness and a loss of control. Hence, the need to understand how these children's digital engagement is being monitored.



9. Monitoring Mechanisms and their Efficacy

9. MONITORING MECHANISMS AND THEIR EFFICACY

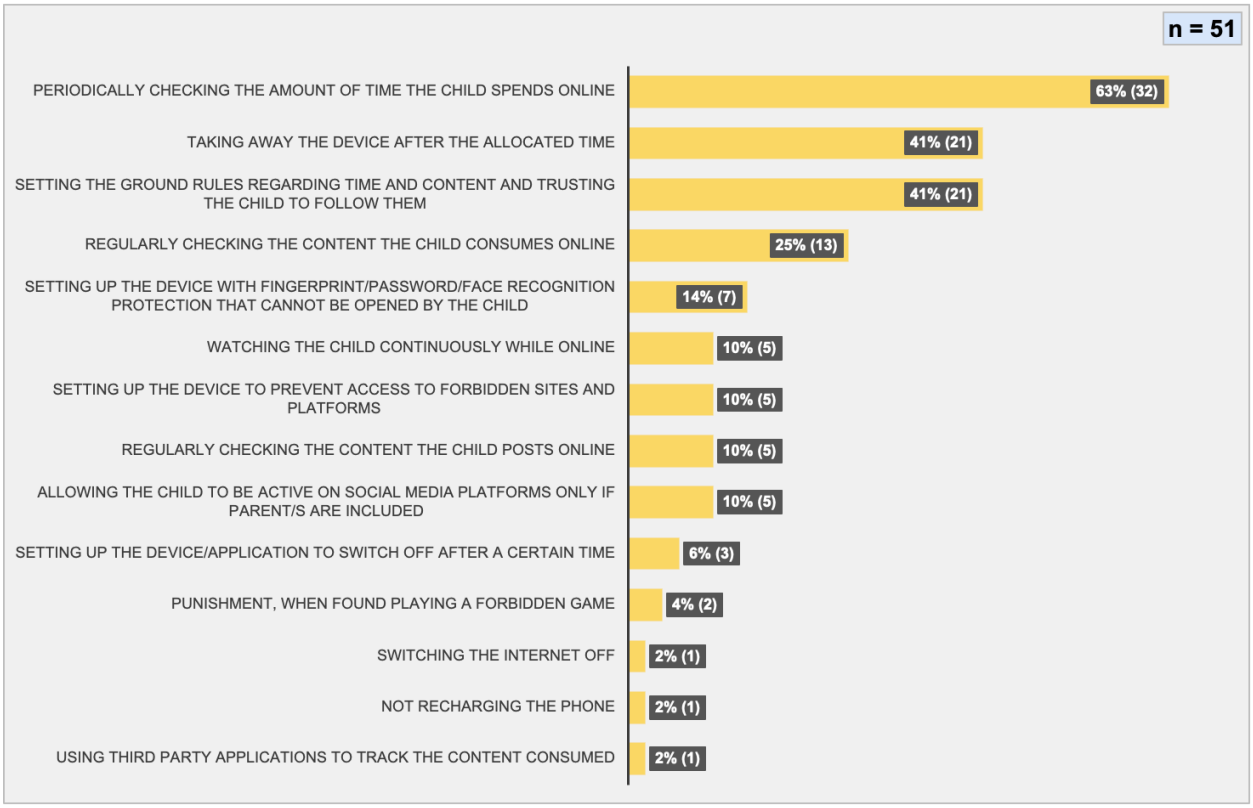
Monitoring has been considered an important component of digital engagement for adolescents as the approaches therein can play a decisive role in enabling healthy online behaviour. The domain of monitoring is highly complex as a single blueprint cannot be developed. This section takes into account multiple aspects of this domain to arrive at an understanding of the different types of monitoring approaches and their efficacy; self-regulation in adolescents; how adolescents respond to monitoring; whether parents are effective role models; and the kind of support all stakeholders could benefit from to build a practice of healthy digital engagement.

In this study, multiple and varying monitoring approaches are in evidence. Out of the 57 parents, 91 percent (52) monitor their children (refer to Figure A8:1 in Annexure 8 for more details). The five parents who do not monitor have children in rural and urban government schools.

Types of Monitoring Approaches

This section compares the perceptions of parents, children and teachers regarding the different monitoring approaches in operation. The parental perspective is presented first.

Figure 17: Parental description of monitoring mechanisms[27]



This figure reveals that the most popular monitoring approaches are:

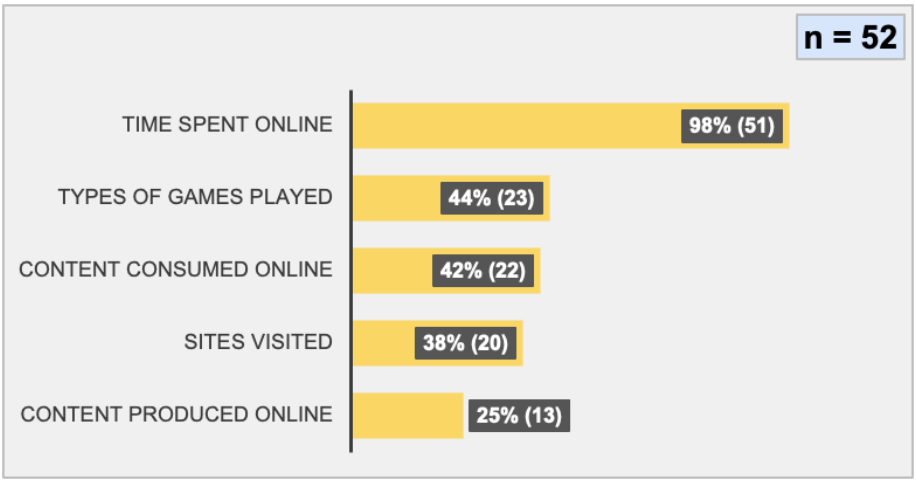
a. periodically monitoring the amount of time the child spends online - 63% (32);
b. taking the device away after the allocated time is over - 41% (21);
c. setting the ground rules regarding time and content and trusting the child to follow them - 41% (21); and
d. regularly checking the content the child consumes online - 25% (13).

In addition to the above approaches, prior research (Livingstone & Helsper, 2008) also suggests: a) active mediation by engaging in conversations with children about online activities, discussing potential risks, and guiding appropriate online behaviour; b) co-viewing, where the concerned adult participates in online activities with adolescents to better understand their interests and behaviours; and c) using monitoring software by using parental control tools to track online activities and screen time. Only a few parents in this study reported doing this. Such approaches can be mutually agreed upon by the children and parents. This could better parent-child communication, and also foster child agency.

[27] Only 51 out of the 52 parents who monitor their child's online engagement responded to this question.

The parents also elaborated on the areas of monitoring.

Figure 18: Parental description of areas of monitoring

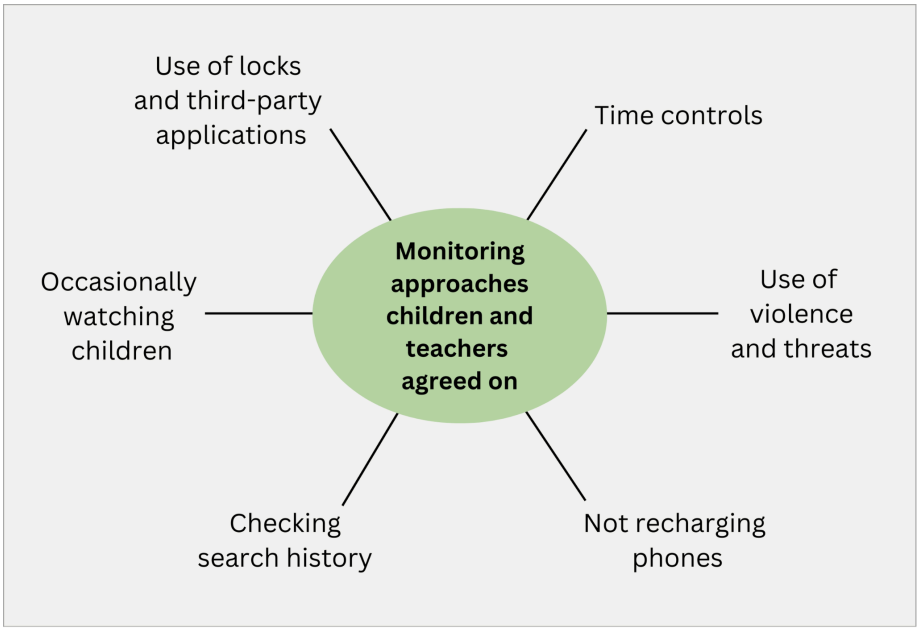


This figure indicates that the most commonly monitored area (98% - 51) is time spent online. This is followed by keeping track of types of games played (44% - 23). This is somewhat questionable as Section 6 reveals that several parents are oblivious of their children's gaming habits as many are playing age-inappropriate violent games. They also claim to monitor the kind of content the children are consuming online (42% - 22); the sites they visit (38% - 20); and the content they produce online (25% - 13). However, given the information provided by the children and the teachers, there is evidence of a measure of dissonance among these stakeholders regarding these three aspects. This is evident from the information presented below.

Monitoring Approaches Children and Teachers Agreed on

According to the children and teachers, the following approaches were in operation. The teachers had a minimal and basic awareness of the monitoring mechanisms the parents employed. Some of them were completely unaware (i.e., Cohort 1 teacher, urban international school; Cohort 2 teachers from the rural and urban government schools; and Cohort 3 teacher, rural government school). The teachers and adolescents spoke of the following monitoring approaches in conjunction.

Figure 19: Monitoring approaches children and teachers agreed on



Use of locks and third-party applications

The adolescents from the urban international and the urban private schools (Cohort 3) mentioned that their fathers used third party applications like Qustodio, Microsoft Family (Cohort 3, urban international school); and Family Link (Cohort 1, urban private school). Teachers from Cohorts 2 and 3 were aware of this. Teachers from Cohort 2 mentioned that parents from the Information Technology (IT) field used their IT skills for monitoring.

Time controls

The adolescents from all schools and cohorts held that the parents set a time limit for monitoring their online engagement, with the sole exception of a few children from Cohort 3, in the urban private school. The parents either set time limits on the device, where it automatically shuts down after the permitted time, or they verbally communicate a quantum of time the child can spend online. In some cases, if children fail to adhere to the parents' regulations, the device is taken away. The teachers corroborated this.

Use of violence and threats

Violence and threats emerged as a common disciplinary approach, especially in urban government and urban private schools. Children from Cohort 1 shared that their parents scream, shout and occasionally slap them when they want them to stop using the device (usually the mobile phone). One teacher from Cohort 3 from the English medium urban government school agreed with this. Children across the board reiterated that their parents *"snatch away"* phones. They found this aggressive and disturbing. In the English medium urban government school, Cohort 1 adolescents stated that they even get beaten for

spending time online. Some Cohort 2 children said that their parents threatened to break the phone. These vivid descriptions suggest a high level of parental frustration and a loss of control over their own responses emanating from helplessness.

> *"Sometimes my parents slap me when I am online for a long time. They say, "go and play outside". My mother says that she will pull my eyes out and give them to someone who can use them more productively."* (Boy, Cohort 1, Class 6, urban private school)

Other monitoring approaches

A few children spoke of other monitoring mechanisms:

- **Not recharging the phone** (rural and urban government schools) - this was reiterated by the Cohort 1 teacher from the rural government school and the Cohort 3 teacher from the English medium urban government school.
- **Checking the child's search history** (children with diverse needs) - a teacher from Group 1 of the same school agreed with this.
- **Watching the child** and occasionally peeping into the room (children with diverse needs) - a teacher from another school expanded on this by stating:

> *"Parents don't know too much - how to use a phone, browsing history, set time limits - they don't know anything beyond Instagram, YouTube and Facebook, they just watch the children."* (Teacher, Cohort 2, Class 8, English medium urban government school)

- **Taking parents' permission** before touching the device (children with diverse needs)
- One teacher added to this list by saying:

> *"Some parents have open conversations with their children."* (Teacher, Cohort 3, Class 10, urban private school)

- Another teacher from Group 2 from the learning centre for CWDN mentioned the use of **incentives** to control online time. A teacher from Cohort 3 (urban private school), stated that the parents created a routine for the children and ensured that they followed it. The parents also turn off Wi-Fi connections when required.

From the data presented in this section, it is evident that parents, children and teachers reported some of the same monitoring approaches. The children described these in vivid detail, while the parents presented a more sanitised picture with no reference to threats

and violence. The teachers who were aware brought in some additional monitoring approaches, which were not articulated by the students. In addition to parental monitoring, some of the children also monitor their own digital engagement.

Self-Regulation and Self-Monitoring

Most children acknowledged that self-regulation does not come easily. Of the children who said they could self-regulate, most were girls (Cohorts 1, 2 and 3, especially Cohort 3). Children from Cohorts 1 and 2 stated that it was hard to self-regulate, despite genuine efforts to do so. Some Cohort 3 children from the English medium urban government school declared they were addicted to their devices and find it hard to self-monitor. If they are in the middle of an online activity, they cannot put aside the device, even if the prescribed time is over. Some children from Groups 1 and 2 (learning centre for CWDN) had learned to self-regulate, and were consistent in their efforts.

However, a few claimed that they can, and have successfully regulated their digital engagement by:

- getting help from their friends

> *"We have a friend group, in which we help each moderate our online engagement and it actually works."* (Boy, Cohort 3, Class 9, urban international school)

- setting reminders
- setting time limits; engaging in other tasks like meditation (Cohorts 2 and 3)
- deleting apps (Cohorts 2 and 3; Groups 1 and 2, learning centre for CWDN)
- taking some help from parents

> *"We lock our phones in the drawer and give the key to our parents. We don't want to touch our mobiles until board exams are over. Sometimes, we don't charge our devices at all."* (Boys, Cohort 3, Class 10, urban private school)

This section reveals that the children genuinely want to put aside their devices and have made serious efforts, but it is highly challenging. This clearly warrants a larger role to be played by the parents in this regard.

The methods the parents use could be respectful of the adolescents' growing autonomy, agency, and desire to participate in their own well-being. Hence, one needs to obtain an understanding of the adolescents' response to the efficacy of the current monitoring approaches.

Efficacy of Current Monitoring Approaches

Prior research reveals that the effectiveness of monitoring approaches can vary based on several factors, including the adolescent's age, the parent-child relationship, and the specific digital context. However, the use of monitoring software; open communication between children and parents; the setting of clear guidelines; and good role modelling are some approaches that have been consistently proven to be effective (Symons et al., 2016).

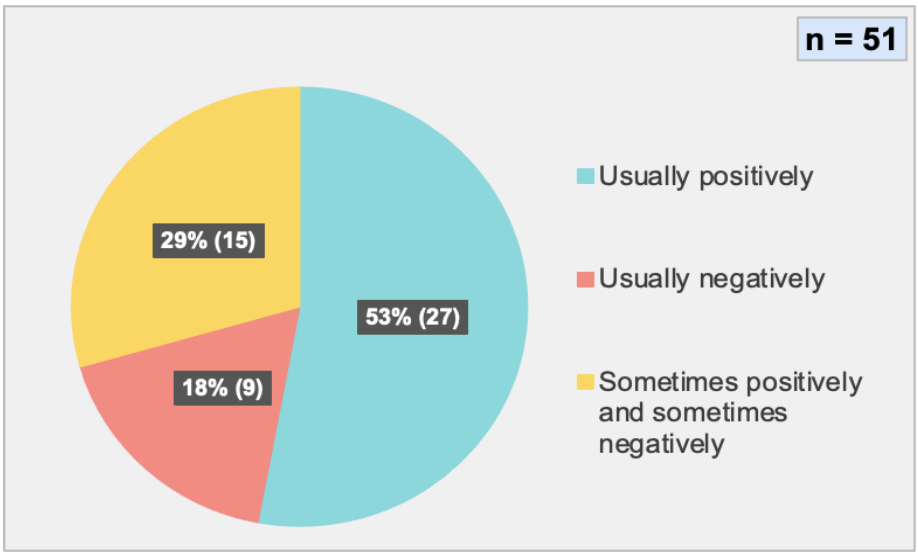
Information from the previous sub-section indicates that some of these are in operation for the study participants. An attempt will now be made to gauge the parents' understanding of and children's responses to these monitoring approaches.

Parents' Opinion of Children's Responses to Current Monitoring Approaches

This section illuminates parental perception on how children respond to the current monitoring approaches used by them. This is detailed by what children feel about the same, and hence what their responses are.

Figure 20 sheds light on parents' perceptions of children's overall response to being monitored.

Figure 20: Parental perception of children's response to being monitored[28]



This figure shows that more than half the parents believed that their children responded positively to parental monitoring. 18 percent (9) felt that their children responded negatively. Close to one third (15) parents felt their children had a mixed response:

[28] 51 out of the 52 parents who monitor their child's online engagement responded to this question.

sometimes positive and sometimes negative. The children painted additional details into this broad overview.

Adolescents' Perspectives on Parents' Monitoring Approaches

The FGDs revealed that many children feel frustrated and angry when their parents stop them from spending too much time online. Many children from Cohorts 1 and 2 stated that their parents made them feel guilty about spending time online. A few children from the urban government school from Cohorts 2 and 3 stated that when the phones are taken away, they become violent.

> *"My mother's whiney voice really triggers me, and she sometimes snatches the phone from me."* (Girl, Cohort 2, Class 8, urban private school)
>
> *"Parents are annoying and condescending when they monitor us."* (Children, Cohort 3, Class 9, urban international school)
>
> *"When my parents snatch the device away from me, all it does is to make me even crazier about getting it back."* (Boy, Cohort 3, Class 10, urban private school)

Open communication does not occur in many households as parents often exercise power *over* children, rather than practise power *with* children in the form of empathetic, deep listening; sharing of feelings in an authentic manner; and demonstrating respect for each person, irrespective of their age.

> *"I feel very bad because my parents keep scolding me. There are times when I am genuinely studying, but my parents shout at me because they are not aware of what I am doing on my phone."* (Boy, Cohort 1, Class 6, English medium urban government school)
>
> *"For us, watching things online is not much of a deal, but for some reason, it is a big issue for our parents."* (Boy, Cohort 3, Class 9, Kannada medium urban government school)
>
> *"They don't understand because they did not grow up with these devices. They are of a different generation, so they are not able to empathise with us. They sometimes sympathise, but they don't empathise."* (many children from Cohort 3, Class 9, urban international school, agreed on this)

These quotes indicate that current monitoring approaches are evoking a similar negative response from children from different schools. This was corroborated by a teacher from the urban international school.

"Time restrictions make the children resent their parents, and consequently, they may end up spending more time online." (Teacher, Cohort 3, Class 9, urban international school)

Most of the teachers held that boys responded poorly to parental monitoring as compared to girls. Barring a few exceptions, most of the children are not amenable to the current monitoring approaches.

"Boys from a lower socio-economic background engage in unmonitored online behaviour." (Teacher, Cohort 1, Class 6, urban private school)
She later added, *"Children who possess their own devices engage in uncontrolled usage as compared to children who use devices owned by family members."*

A Cohort 3 teacher from the urban private school maintained the current monitoring approaches for her students were largely efficacious. This could be attributed partly to the fact that these children are preparing for their board exams, and they are effectively self-monitoring. Doing well in their exams is of paramount importance for them.

Against this backdrop of discontent and dissatisfaction, an attempt was made to understand whether the children believed their parents were good role models, as prior research highlights good role modelling helps develop self-regulation.

Role of Parents in Serving as Role Models

91 percent of parents (52) claimed that they can set a positive example for children with respect to online engagement (refer to Figure A8:2 in Annexure 8 for more details). However, most of the students stated that their parents did not serve as good role models for a variety of reasons. They are online themselves for long hours; they entertain themselves with their devices during work hours; they look at their devices while cooking and eating; and they do not spend enough time with their children, as they prefer their devices.

"To be straight, I do not like how my parents behave when they are online. Therefore, they have no business looking at me as if I am in the wrong when I am online." (Boy, Cohort 1, Class 5, urban international school)

"My father claims he often has office work, which he has to do online and then he puts the phone on silent and watches football matches." (Boy, Cohort 1, Class 6, urban private school)

"My mother is always on the phone. I have no idea what she watches. My parents sleep to Instagram and wake up to WhatsApp. But when I do that, my parents yell at me." (Boy, Cohort 2, Class 8, urban private school)

The children who felt their parents could be good role models were few. One boy from Cohort 3 from a rural government school maintained that his father uses his phone only when he is in his shop. In the Kannada medium urban government school, the girls displayed immense respect for their parents, indicating that they could be ideal role models for these children. Some children understood why their parents needed to spend time online.

"My parents are in software, so they need to spend a lot of time online, while I am interested in arts and crafts, I don't want to be online. I pick up the device only when my mother allows me, otherwise, I feel guilty." (Girl, Cohort 2, Class 8, urban private school)

This section reveals varying responses, indicating that while most parents do not emerge as effective role models, a few do. Hence, there is potential for parents to be able to do this.

Given this undulating terrain where parents are trying to control the children, where children are resentful and dismissive and parents are increasingly frustrated, it is worth understanding how children find loopholes in these monitoring approaches.

Methods Children Adopt to Counter Current Monitoring Approaches

This study reveals that many children know how to counter their parents' attempts at monitoring them. It is interesting to note that this is being done by children from all genders, cohorts and schools, though it appears that parents find it easier to monitor and control the girls rather than the boys.

- Awareness of parent lock passwords
- Resetting of time controls on the device without parents being aware
- Disabling closed circuit television (CCTV) cameras through password knowledge
- Appropriating family members' phones when they fall asleep
- Not using the phone in front of the parents
- Hiding and playing on the device

- Moving from one device to the other, which makes it hard for the parent to keep track
- Switching to acceptable online pages when the parents watch them
- Pretending to do homework, just to get more online time

"My mother has put a password on the device, but I know the parentlock password, so I can access the device whenever I want. I also know how to increase the time and my mother is not aware of this." (Girl, Cohort 1, Class 5, urban international school)
She later shared that she feels she has broken trust with her parents by circumventing their monitoring strategies. She felt very bad about it, and stated that when she becomes a parent, she would not be as strict as them.

"We are able to use our parents' phones without permission." (Children from Cohort 1, Class 6, rural government school)

"There are CCTV cameras around the house, but I know how to disable these. I know the password, and I have even shared it with my friend." (Boy, Cohort 1, Class 6, urban private school)

"I hide in the kitchen and play games on the phone." (Boys, Group 1, learning centre for CWDN, and Cohort 3, Class 9, rural government school)

As a result of all this circumvention, the children are using barred applications; spending many hours online; active on Instagram; posting pictures without their parents' knowledge; and playing games their parents have forbidden.

It is interesting to note that despite all this, some of the children still want guidance and supervision. A few children from all cohorts stated that being monitored helped keep their online time under control. They shared that they get irritated when their parents tell them to stop but later, they understand it is for their own good. They feel that parents should be aware of their online activities as it may have adverse effects on them in the long run. A particularly insightful comment came from an 11-year-old boy.

"We are children, so being online has a different impact on us compared to our parents because our brains are developing. Adult brains are developed, so it does not affect them in the same way." (Boy, Cohort 1, Class 6, urban private school)

In the light of the multiple issues and nuances surrounding the area of monitoring, it was deemed fit to ask the parents whether they needed support in this area.

Nature of Inputs Required to make Online Engagement Healthy and Safe

This section presents the questions presented to the parents, along with their responses to uncover productive and effective approaches to monitoring (refer to Figures A8:3 to A8:10 in Annexure 8 for details)

Table 7: Nature of inputs parents require to make online engagement healthy and safe

Q. No.	Question	Parent Response
1	Is it important to engage in shared online activities with your children?	86% (49) felt it is important to do so
2	Should you be updated on the online media content your children are consuming?	75% (43) felt they should be updated
3	Do you require inputs to create a safer online environment for your children?	53% (30) wanted these inputs
4	Do you need expert help to build trust and enable effective communication with your children?	39% (22) wanted expert help for this purpose
5	Do you need expert help to enable children's online self-regulation?	46% (26) wanted expert help for this purpose
6	Do children with physical and intellectual disabilities require different monitoring mechanisms?	70% (40) felt they needed different monitoring mechanisms
7	Do you need expert inputs on monitoring children with physical and intellectual disabilities?	70% (7 parents of children with diverse needs) felt that they needed expert inputs
8	Should schools employ experts to create materials to assist in guiding children's online behaviour?	72% (41) felt that schools should employ experts for this purpose

These questions evoked fairly telling responses when juxtaposed with adolescents' opinions and requirements. What parents indicated they should be doing (engaging in online activities with their children and being aware of the social media content their children are consuming) appears to differ from what they are actually doing, based on what the children say. Support from experts in the multiple domains detailed above could play a pivotal role in supporting parents and adolescents in having open, respectful and values-based conversations and developing healthy boundaries for online engagement. Despite this, only half or less than half the parents stated that they needed these inputs.

Regarding children with diverse needs, 70 percent of their parents (7) wanted expert inputs, and 70 percent of all parents (40) indicated that different monitoring mechanisms were required. 72 percent of parents (41) wanted schools to employ experts to assist in guiding children's online behaviour, indicating they are willing to let the teachers play a large role in this domain.

Key Takeaways

This section reveals the existence of multiple monitoring approaches in operation, with a single parent often taking recourse to more than one approach. The socio-economic background of these adolescents varies widely, where many parents do not possess the required level of digital literacy to effectively play this role. Hence, there is minimal supervision in these homes. All three categories of study participants maintained that setting time controls is the most prominent approach. Hence, a strong recommendation is to focus on the content also, rather than just online time. If the content is healthy, extra online time can sometimes be justified. Regarding the domain of monitoring of content, parents and children seemed to display a measure of dissonance, with the former maintaining that they monitored their children's online content, sites visited, and games played. The children held that the parents were not very knowledgeable in this regard. Some adolescents claimed they often consumed appropriate content, yet their online time was curtailed.

In terms of monitoring approaches, it is a matter of concern that the adolescents stated the use of threats and violence as a prominent monitoring approach. The parents made no mention of this. From what the children shared, there is evidence of a high level of parental frustration emanating from a feeling of helplessness.

Very few positive approaches were described, like open conversations and incentives. This indicates that there is scope to build on these.

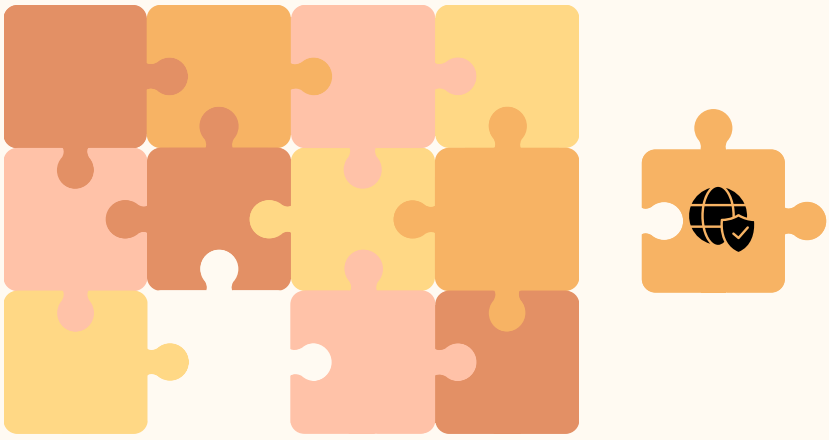
Given this complex and difficult backdrop, some children have devised self-monitoring mechanisms, but most of them found these difficult to implement. These adolescents clearly articulated that they do need guidance and support as they are unable to resist the allure of the digital world. This warrants a larger empathetic role and response from the parents.

In terms of the efficacy of monitoring approaches, the parents presented a more favourable picture than their children. Most children were vocal about their frustration,

resentment and anger about being monitored. This calls for value-based and respectful communication.

The parents believed themselves to be role models, but this was dismissed by a number of children for very sound reasons. A few effective role models did emerge, suggesting that this is possible. Parents often try to control their children's behaviour, and this manner of enforcing discipline seems to work better over girls than boys.

It is interesting to note that despite this beleaguered situation, only less than half the parents articulated that they needed expert inputs to effectively monitor their children. They seemed to feel the schools can play a bigger role in this regard. This indicates the need to work closely with the parents to make them aware of their children's perspectives and online behaviour so that effective bridges can be built between the two.



10. Inputs for Enabling Safe Digital Engagement

10. INPUTS FOR ENABLING SAFE DIGITAL ENGAGEMENT

Literature indicates that inputs on online safety can be beneficial to children, and contribute to more responsible internet usage (Al Shamsi, 2019). The awareness of risks, and how children can address them, can help mitigate the negative impacts that online engagement can have on children. This section delves into the digital safety education that children in this study were provided, its content and utility, and explores whether student-led initiatives to promote online safety are plausible.

Sources of Inputs

Most inputs on online safety are provided by teachers or school staff, and in some cases, an external resource person or police officer (refer to Table A9:1 in Annexure 9 for more details). In some cases, there was a mismatch between the responses provided by children and teachers. In the learning centre for CWDN, children from Group 1 said that it was their parents who had given them inputs, but the teachers held that they had provided inputs as well, which the children made no mention of. In the rural government school, students across all three cohorts stated that they had received no inputs, but this was not reflected in the responses from the teachers, except for Cohort 2. In some cases, like the urban government schools, students maintained that they had received inputs, but the teachers said otherwise. In the urban international school, students across all cohorts had received inputs, but the teachers from Cohorts 1 and 2 were unaware of this. Some dissonance can also be observed in the responses provided by the students and teacher of Cohort 3 from the urban private school.

An English medium urban government school teacher from Cohort 2 and a teacher from the learning centre for CWDN (Group 2) stated that there were basic inputs on online safety that were woven into the school curriculum, but most students were already aware of this information. The other teachers did not mention any other inputs on online safety that were part of the academic curriculum.

Out of the 57 parents, a little over half (54% - 31) stated that their children had received inputs on safe online engagement; 30 percent (17) maintained that they had not and 16 percent (9) indicated that they did not know (refer to Figure A9:1 in Annexure 9 for more details). Most of the parents who said they did not know were from the rural and urban government schools, and a few from the learning centre for CWDN and the urban private school. Out of the 54 percent (31) who held that their children had received inputs, 84 percent (26) stated that they were provided by school teachers/staff; and 32 percent (10)

mentioned that they were provided by an external resource person (refer to Figure A9:2 in Annexure 9 for more details). Most of the parents who shared these responses were from the urban international and urban private schools.

Nature of Inputs

The table below paints a picture of the inputs received by children and compares it with the responses provided by teachers.

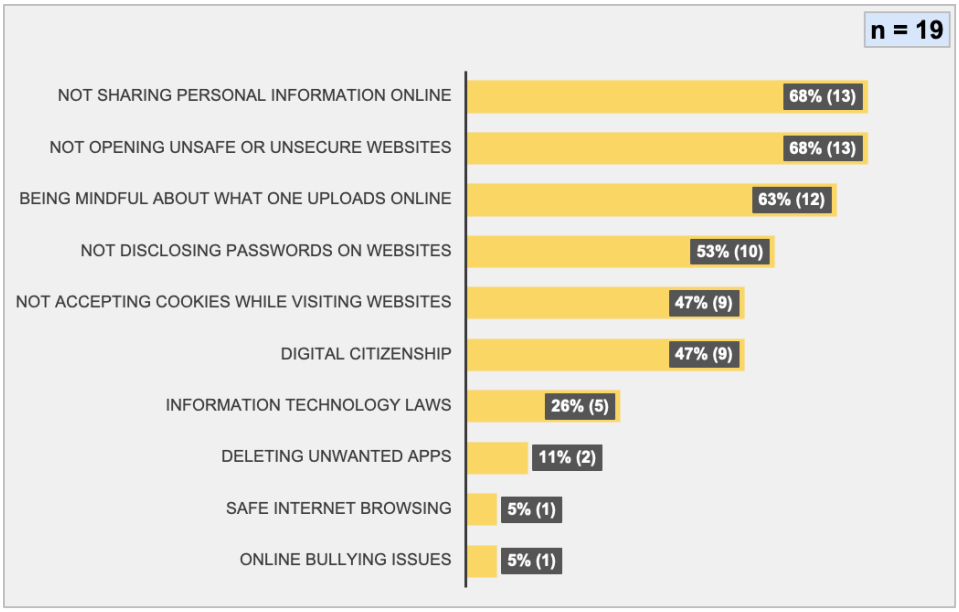
Table 8: A comparison of children and teacher perceptions on online safety inputs

Cohort/ Group	Student Perception on Nature of Inputs	Teacher Perception on Nature of Inputs
Groups 1 and 2 (CWDN aged 10 to 16 years)	Inputs on hackers from parents Generic inputs from teachers	Positive and negative outcomes of digital engagement Threats, risks and dangers of being online
Cohort 1 (Classes 5 and 6)	How to use computers Cyberbullying Not sharing passwords Generic inputs - not posting too many pictures online	How to use a digital device; ideal time to use one; when they should be avoided Cyberbullying Data privacy Not posting pictures on WhatsApp Face morphing
Cohort 2 (Classes 7 and 8)	Digital citizenship Checking if websites are secure Not clicking on unknown links Money scams Other generic inputs	Digital footprint Risks of using the internet
Cohort 3 (Classes 9 and 10)	Not clicking on unknown links Phishing Two-step verification on social media Digital addiction Not sharing passwords online Not posting too many pictures online	Urban international, urban private and rural government school teachers were not aware. The English medium urban government school (Cohort 3) teacher stated that inputs were situation-based, and there was no fixed curriculum or structure.

This table shows that there were some common topics that were listed by the children and teachers. Children from Cohorts 1 and 2 and Group 2 from the learning centre for CWDN stated that the inputs were generic, because of which they could not recall too much. The teachers did not seem to feel the same way.

Of the 31 parents who said that their children had received inputs on safe online engagement, 61 percent (19) stated that they were aware of the topics that had been covered, based on interactions with their children (refer to Figure A9:3 in Annexure 9 for more details). The figure below sheds light on this.

Figure 21: Parents' perception of the nature of online safety inputs



This figure shows that 68 percent of parents (13) stated that their children's online safety sessions consisted of inputs on not sharing personal information online, and not opening unsafe or unsecure websites. 63 percent (12) agreed that children were given inputs on being mindful about what they were uploading online, and 53 percent (10) agreed on not disclosing passwords. A small number of parents provided some additional topics, which were not mentioned by the children or teachers. These included not accepting cookies (47% - 9) and information technology laws (26% - 5).

It is evident that there is no fixed set of topics that is being covered, as there are varying responses provided by the children, parents and teachers. It does not suffice to stop at just the nature of inputs, it is also important to gauge its utility.

Utility of Inputs

Most children felt that the inputs provided to them were generic and included material that they were already aware of. They felt that the same topics were repeated each year, making these sessions redundant.

> *"Everyone thinks that spam messages are the problem, but mental health and the psychological impact of social media usage are not addressed. We know better than to click random links."* (Girl, Cohort 2, Class 8, urban international school)

A few students from Cohort 2 felt that the information on money scams may come in handy in the future. Cohort 3 students from the Kannada medium urban government and urban private schools found the inputs useful, particularly the ones involving information on two-step verification on social media. No proper responses were obtained from the children of Groups 1 and 2 from the learning centre for CWDN.

In terms of what they *would* like to learn, children made the following suggestions:

a. Teachers can inform students of apps they could use that would help with their studies.
b. Cohort 3 children from the English medium urban government school suggested inputs on how not to spend money on games.
c. Discussion on the psychological impacts that online engagement can have on children.

The responses provided by parents and teachers were starkly different from the students' responses. Out of 19 parents, 74 percent (14) felt that the inputs were 'very useful', and 26 percent (5) felt that the inputs were 'useful', indicating that they have a positive view of the inputs provided (refer to Figure A9:4 in Annexure 9 for more details). Teachers across cohorts felt that the inputs were useful for students, and that they were well-received. The teachers from the learning centre for CWDN, on the other hand, were not very sure of the utility of the inputs they had provided. This shows that large gaps exist between the opinions of the children, parents and teachers, which need to be addressed. This dissonance is clearly evident in Annexure 4.

Role of the School in Enabling Safe Online Engagement

A framework constructed by Walsh et al. (2022) could guide schools in shaping their online safety education for students. These include:

1. Educating children on their digital rights and responsibilities

2. Empowering them to leverage the positive aspects of the internet; being aware of online harms, and how to mitigate them
3. Adopting a whole-school approach[29]
4. Building skills to navigate the digital world, and also exercise agency
5. Review and evaluation[30]

Adding to the whole-school approach, teachers and parents (n = 57) felt that they could play a role in enabling safe digital engagement amongst their students, with the help of the school, through the following means (refer to Figures A9:5 to A9:9 in Annexure 9 for more details):

- Participating in training and awareness programmes or workshops for parents, teachers and children to enhance their knowledge of online safety, so that they can effectively empower children. 86 percent of the parents (49) were interested in this. These were already taking place at the urban international and urban private schools.
- Knowledge of the positive aspects of the internet, and how to leverage them.
- Knowledge of the laws and policies pertaining to adolescents' digital engagement in India. (This is further discussed in Section 11 of the report.)
- Information on the helplines children could use to address any adverse online issues. (This is further discussed in Section 11 of the report.)
- Encouraging and empowering children to become more responsible netizens.
- Establishing open communication with children and maintaining confidentiality. 84 percent of the parents (48) agreed with this statement. Some teachers suggested having a counselling system in place to address this.
  The English medium urban government, urban international and urban private schools have such a system in place. Teachers from the rural government school (Cohort 1), the Kannada medium urban government school (Cohort 3), and the learning centre for CWDN (Group 2) were interested in setting up such a system in their schools. Teachers from the rural government (Cohorts 1 and 2) and the Kannada medium urban government schools (Cohort 2) did not feel the need to set up a counselling system, either because it was already being handled by school teachers, or because they did not feel such issues to be prevalent in their students.
- Being aware of what to do in case a student reports an adverse online event and reporting it to the appropriate authorities.

[29] A whole-school approach refers to a setting in which various stakeholders are involved in improving students' learning and well-being. This includes students themselves, school staff, teachers, administrators, parents and the wider community (International Bureau of Education, 2018).
[30] of online safety education and its utility for children, in order to strengthen the online safety education curriculum

- Over half of the parents (63% - 36) expressed an interest in being part of a peer support group associated with the school or other locations, which would focus on internet safety and digital addiction in the context of children.
- 58 percent of the parents (33) were unaware of the signs of digital addiction, and 53 percent (30) wanted inputs on the same.

Student-Led Initiatives to Promote Safe Digital Engagement

In the current study, a vast majority of the students were not interested in participating in any such initiatives to promote safe online engagement through awareness campaigns and peer mentoring. It was only a few children from one English medium urban government school who said that they would be interested, but their responses lacked enthusiasm.

> Interestingly, from a Kannada medium urban government school, the girls were willing and open to participate and lead digital awareness campaigns in their school.

Overall, the adolescents felt that nobody would listen to them during such campaigns, and some also indicated that they did not have the adequate resources to be able to do so. Some felt uncomfortable with telling other children what to do.

> *"We cannot trust any peer group because nobody will listen to them. The peers themselves are engaging in online activities, so it does not make sense to guide other students."* (Teacher, Cohort 2, Class 8, urban private school)

Children across all cohorts in the urban private school did not find student-led initiatives and peer support groups highly relevant, as they felt that their school was doing what they could in terms of online safety education.

Parents and teachers, on the other hand, felt otherwise. Out of the 57 parents, 95 percent (54) felt that peer support and mentoring programmes should be established in the school (refer to Figure A9:10 in Annexure 9 for more details).

Most teachers agreed that their schools should consider setting up a peer support and mentoring group for children. Teachers from the urban private school and Kannada medium urban government school (Cohort 1 and 2, respectively) shared that such a group was already present in their schools and had the potential to grow. Other teachers from Cohorts 2 and 3 felt that senior students could provide support to the juniors. A teacher from Cohort 2 (urban private school) shared her insights as well.

"We cannot trust any peer group because nobody will listen to them. The peers themselves are engaging in online activities, so it does not make sense to guide other students." (Teacher, Cohort 1, Class 8, urban private school)

Most teachers felt that their students should be involved in awareness campaigns to promote safe online engagement. Children from Cohorts 1 and 2 in the urban international and urban private schools were already taking part in such activities, but the teachers were unsure of how useful they were. Out of the 57 parents, 93 percent (53) felt that their children should engage in such awareness campaigns (refer to Figure A9:11 in Annexure 9 for more details).

Key Takeaways

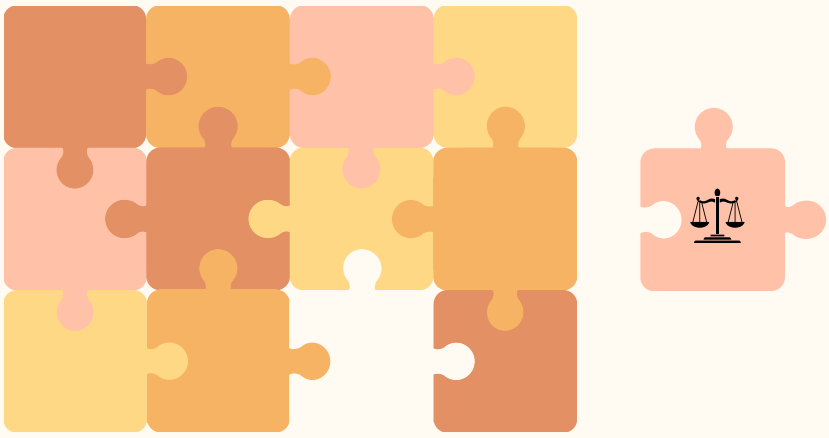
The data from this section shows that there are large differences between the responses provided by children, parents and teachers. This lack of synergy is clearly represented in Annexure 4. This indicates that this critical area has not been suitably handled almost across the board. A special mention needs to be made of the rural and urban government schools, as there are either minimal, inadequate or no inputs. This establishes the need for an intervention.

Some students had no recollection of receiving any inputs on online safety, but the teachers' responses did not reflect this. A reason for this could be that the inputs covered in school were not relevant to the children. Most children felt that the topics were generic and repetitive and did not find them useful. However, the teachers and parents maintained that these inputs were beneficial to the students. This calls for further communication between children, teachers and parents. Schools can take the initiative of finding out from the students the areas they would like information on, and curate the curriculum accordingly. The responses from the children also warrant a revision of the curriculum each year, to avoid repetitions. Such school initiatives need to be created *for* children and *with* children.

Most parents and teachers believed that student-led initiatives, like peer support groups and student-led campaigns would help spread the word about online safety and prevent cyberbullying amongst students. Children, for the most part, clearly expressed their aversion to doing so. The role of the school, therefore, is of prime importance.

In maximising the role of the school in providing practical and important inputs on safe online engagement to children, parents and teachers can be exposed to appropriate

awareness sessions and workshops. Caregivers need to be empowered themselves, before they can empower children. Schools can bring in experts to implement this process. These experts need to give cognisance to the nature of inputs articulated by both the children, parents and teachers in this study.



11. Awareness of Laws and Policies Surrounding Cyber Safety

11. AWARENESS OF LAWS AND POLICIES SURROUNDING CYBER SAFETY

In cases involving adverse online experiences that pose a threat to the safety of a child, knowledge of the law and redressal mechanisms can be beneficial. This would enable the caregivers and their children to take the necessary steps to seek help and address any harm caused. Knowledge of the policies of social media applications can be helpful in enabling children's safe digital engagement. This could form one part of the mechanisms used by caregivers with their children to enable safe digital engagement. This section looks into the awareness of laws and policies on cyber safety amongst teachers and parents.[31]

None of the teachers had a clear picture of Indian cyber safety laws and policies specific to children. A similar set of responses were received from the parents. Out of the 57 parents, 9 percent (5) stated that they were aware of Indian cyber safety laws and policies (refer to Figure A10:1 in Annexure 10 for more details). However, only one of these responses provided a clear explanation of these laws. The mother of a child from Cohort 3 (urban international school) shared her knowledge of the Protection of Children from Sexual Offences (POCSO) and Information Technology (IT) Acts.

Most teachers across cohorts and groups were unaware of the authorities children could approach, or helplines they could use in case of adverse online experiences. Some teachers from the urban international and urban private schools mentioned CHILDLINE 1098, the Cyber Cell, and the Bangalore Police, but did not seem to know any more than just naming these resources. (Please refer to Annexure 11 for more details on Indian cyber security laws, policies and redressal mechanisms available for children.)

54 percent of the parents (31) stated that they would be interested in receiving this information as well (refer to Figure A10:2 in Annexure 10 for more details). 15 out of 17 teachers stated that they would like inputs on the laws and policies surrounding cyber safety, as well as information on helplines. 75 percent of the parents (43) felt that a different set of laws and policies needed to be created for children with physical and intellectual disabilities (refer to Figure A10:3 in Annexure 10 for more details).

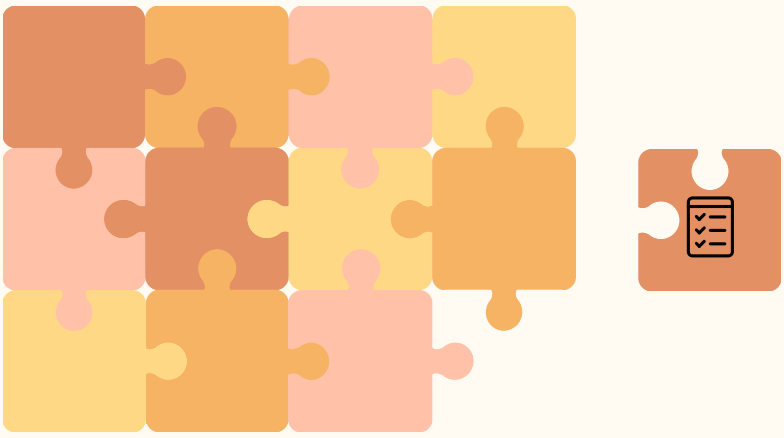
With regard to the teachers' awareness on social media policies, with the exception of three teachers, the others were unaware of the minimum age at which children could create a social media account of their own (13 years). Information on the other policies and measures to ensure child safety on social media platforms is important and useful

[31] The children were not asked questions pertaining to this area.

information for parents and caregivers. Companies like Meta and Google have incorporated several child-friendly features into the design of their applications (Livingstone, 2024). Such measures can also aid in a more efficient monitoring and guidance process.

Key Takeaways

This section reveals that teachers and parents are largely unaware of the cyber safety laws and policies applicable to children in the Indian context. This is visually presented in Annexure 4. Besides the measures that could be taken within schools to provide support to a child going through an adverse online experience, most teachers were unaware of the official procedures to make a complaint with the authorities, or even helplines that could be used. Providing children with the knowledge and options that can be used to address their concerns could be beneficial to them, especially in the case of children hailing from lower socio-economic backgrounds, as their parents may not have the means or the knowledge to support them. Schools could perhaps take the initiative of engaging in more involved conversations and sessions with parents, so that they are equipped with a course of action, should any adverse situation occur.



12. Conclusions and Recommendations

12. CONCLUSIONS AND RECOMMENDATIONS

This study simultaneously provides a detailed and nuanced understanding of how adolescents from varying backgrounds, ages and genders engage with the digital world and the associated impact. It corroborates many findings from the extensive literature review and some new insights emerge.

Very few studies in the past have included the three key stakeholders to uncover multiple dimensions of this phenomenon. In this study, the exploratory research approach, which relies heavily on the qualitative component, reveals that the adolescents, parents and teachers tend to have sometimes similar, but more often, varying gazes on this phenomenon. Further, the adolescents of different ages, genders and school categories represent differing stances. It needs mention that in every single PAR and FGD session, the children were more than willing participants. Their transparency and honesty indicated a strong desire to dialogue.

The complexity of this phenomenon can be teased out by highlighting the following elements. The additionality of this study pertains primarily to analysis provided below.

Variations and Synergies in Stakeholder Perspectives

Regarding stakeholder perspectives on different aspects of the adolescents' digital engagement, some significant insights emerged. The variations in understanding are starker in some areas as compared to others.

At the very outset, it needs mention that across the board, the adolescents clearly possessed the most detailed understanding on all aspects of this phenomenon. The parents presented the outlines of the picture; sometimes painted in some aspirational brushstrokes; and on occasion, even actively contradicted what the children stated. This revealed that parents find this domain hard to comprehend and subsequently handle. Often, the teachers represented an even smaller slice of understanding than the parents. This is a matter of concern. As children advance into adolescence, teachers can be a powerful influence. They have the potential to function as safe adults who can create a space for value and rights-based discussions.

It is relevant to draw attention to the aspects where there were synergies, and where differences emerged.

Regarding **age of initiation of digital engagement and age of device possession**, some synergies are in evidence between parents and their children, while teachers are poorly informed on this aspect. This is not an unexpected finding, but the teachers can play a pivotal role in guiding parents as to what is the suitable age for these two aspects. Hence, they need to be more aware.

Regarding the **nature of digital engagement**, the parents and teachers had an overall sense but not an in-depth understanding of how these children engaged online. Parents from the learning centre for CWDN, urban international and urban private schools seemed to be more aware of what their children do online, as compared to parents whose children go to government schools. This is because some of the latter face digital literacy issues. This could have been compensated for by the teachers from government schools, but most of them possessed an even more limited understanding regarding this domain.

The parents and teachers seemed to be most aware of their children's online educational engagement because they prioritise this component. The areas of digital engagement where children faced issues, like gaming, entertainment and social media, were not widely or deeply understood by the adults. This raises a red flag.

Regarding what the **children did offline**, the parents seemed to have a much better understanding of these activities as compared to their knowledge of their children's online engagements. This is a clear reflection of their capabilities and priorities. Offline engagements are easier to understand than children's online activities and parents attribute more value to these. The children unequivocally held that they preferred their offline activities but could not indulge in these more actively because of the allure of the online world. This establishes that it is important for parents to gain a better understanding of how they can help their children to deal with this.

This takes one to the domain of **monitoring or supporting and guiding the children's online engagement**. This study indicates that the parents have adopted multiple approaches. An entire spectrum is in evidence, from minimal control and support to extensive regulation. Minimal and ineffective approaches can be seen for a large section of these adolescents. All the three stakeholders agreed that setting time controls was the most prominent approach. Some of the adolescents indicated how they could easily work around these. Regarding digital content, parents felt they knew what their children were accessing online but many children disagreed. Several adolescents stated that threats and actual violence are used for disciplining them regarding their online engagement. The parents made no mention of this. Most of the parents indicated that their approaches were effective, but many adolescents countered this claim. Overall, the former believed themselves to be role models, but many children did not think so. Perhaps the clearest finding regarding this

is that a large number of children from varying backgrounds maintained that their parents do not have the skills, knowledge, empathy or capacity to support and guide their online engagement.

Apart from parental monitoring, some of the schools have tried to provide children **inputs on cyber safety**. This study reveals vast differences between the responses provided by children, teachers and parents. Some students had no recollection of receiving any inputs on online safety, but the teachers' responses countered this. Most children felt that the topics were generic and repetitive and did not find them useful. However, the teachers and parents stated that these inputs were beneficial to the students.

The one area where synergies emerged was on **awareness of cyber safety laws and policies applicable to children**. But unfortunately, both teachers and parents[32] were largely **unaware**. This is a matter of concern.

Annexure 4 presents a heat map indicating the varying levels of synergies or agreement between the responses provided by children, parents and teachers. This map visually summarises the aspects mentioned above. Much of this heat map depicts the colours red (no synergy) and yellow (low synergy). The table also shows some instances of moderate synergies (depicted in light green) and very few instances of high synergy (dark green) between the stakeholders. **Moderate to high synergies are primarily seen with regard to children's offline activities and online education.** Therefore, there is a **need for building bridges between the three key stakeholders**, if positive outcomes are to emerge.

Apart from these significant gaps and some overlaps, it is relevant to draw some conclusions around how gender plays out in digital engagement.

Understanding the Role of Gender in Digital Engagement

This study reveals almost across the board that the boys' digital engagement is less healthy than that of the girls. The boys rather than the girls play many more online games (sometimes violent ones) from a very young age. Gaming tends to be one of the more alluring aspects of digital engagement.

The girls gravitate more towards educational, creativity enhancing and social media platforms and sites. They display a larger measure of mindfulness and concern about their digital engagement.

[32] The children were not questioned on this aspect.

Parents often try to control their children's behaviour, and this manner of enforcing discipline seems to work better with girls than boys. Further, the girls seem to be able to self-regulate more effectively. To add to this complexity, there is also a tendency on the part of parents to be more indulgent with the boys. This is particularly true for boys from rural and urban government schools. More boys from this background had early access to the digital world and owned their own devices at a younger age, as compared to the girls.

This study also reveals that boys spend more time online than the girls. Some of the girls have also been adversely impacted by their digital media engagement; this seems to be more prominent among the boys.

It is now relevant to touch upon the age factor.

Does Age and Age-Appropriateness Emerge as a Significant Factor?

This study reinforces the conclusions from prior research that early digital engagement and early device possession can enable unhealthy online behaviour. This is also evident from the various case vignettes of this study, where some children displayed the ability to self-regulate and to engage with the digital world mindfully due to 'late' digital engagement and vice-versa.

Age-appropriateness is a critical element. This emerges strongly in the context of games. In the offline world, most children play age-appropriate healthy games, while the same children (especially boys) are pulled into violent age-inappropriate online games. The parents are not equipped to monitor and moderate this type of engagement, as they are sometimes unaware of the content and impact of these games. It is easier for a parent to play a board game or a sport, than play online games with their children. These games require a different type of skill in terms of hand-eye coordination which these children (who are digital natives) possess. In some cases, it is possible that parents may shy away from these because they do not regard these as relevant or desirable skills for themselves. Hence, the gaming domain becomes a black hole, which children end up navigating themselves.

Very young children (Class 5) mentioned inadvertently accessing age-inappropriate content online (likely pertaining to pornography). They admitted that it made them uncomfortable, and they did not know how to handle this information. They did not reach out to their parents at this juncture.

Thus, this study reiterates the importance of guiding and supporting adolescents in choosing age-appropriate content to enable a healthy outlook.

Another key aspect that needs reflection is the extent to which the school category is an influential variable.

Is School Background a Key Variable?

Most children from the urban international school and some children from the urban private school hail from a more privileged background than those from rural and urban government schools. This, however, is not necessarily advantageous for several reasons.

The age of initiation of digital engagement and age of device possession is markedly earlier for most children from urban international and urban private schools. This has influenced the trajectory of their online behaviour somewhat adversely. They may be of a higher socio-economic category, but like all adolescents, they may not have the social and cognitive maturity to deal with the onslaught of the risks associated with online engagement.

In the case of children with diverse needs, the parents play a pivotal and a positive role in delaying the age of initiation and age of device possession for their children. The issue of peer pressure is likely to be less. In the rural and urban government schools, affordability seems to be the issue rather than this being the result of a conscious choice on the part of the parents. This study reveals that this delayed engagement has made all these (somewhat less privileged) children benefit from the educational and social opportunities provided by the digital world.

There is evidence from this study that more children from the urban international and urban private schools faced problems in balancing their offline and online engagements in a healthy manner, unlike the children from less privileged backgrounds. This prevails among the latter more because of lack of resources rather than mindful online engagement. Nonetheless, it has prevented unmitigated access to digital devices. This has rooted them more in the offline world and has resulted in positive outcomes for the latter category of children. This does not mean that these children are in an ideal situation. Often, poor digital literacy in these homes means inadequate support and poor access to mentoring and guidance.

This study reveals that the inputs from school on cyber safety are far from ideal on the whole, but for children from less privileged schools, it is either absent or negligible. These children require this information and support even more than the children from urban international and urban private schools, as they are entering spaces where people at home may not offer the requisite support.

In addition to these key variables, this study establishes that the children are largely well-intentioned when they enter the digital world. Once they enter, their engagement is highly multi-dimensional. These cannot be simplistically categorised into being either healthy or unhealthy. They could veer towards any direction. It is important for them to obtain support in making healthier and safer choices as they engage with the digital world. They need to experience a sense of agency in how this plays out. The children clearly articulated that **they need help** in managing their online engagement, but the help they receive from their parents and the manner in which it is provided may not always be acceptable.

Therefore, keeping this analysis at the forefront, the following recommendations are being put forward.

Recommendations

This section seeks to put forth a series of child-centric empathetic recommendations.[33]

1 Maintaining open communication channels with children

This seemingly simple recommendation is multi-layered and nuanced. It takes mindfulness; a measure of 'active listening' and continuous learning on the part of the parents to ensure that this happens. They can grow along with their children. They need to learn what children do online, and even be willing to accept them as their teachers. As children's online behaviour shifts and changes, the parents need not actively participate, but they could at least understand these movements. This can play a powerful role in building bridges between these two key stakeholders. This study establishes the need for this. This is relevant for the third key stakeholder (the teachers) as well.

Free flow of information and feelings between parents and children is a requirement in all aspects of life, not just pertaining to the digital domain. It can spill into this domain organically.

This could enable active listening and authentic sharing between parents and children thereby enhancing receptivity to parental guidance. Over time, it is anticipated that this

[33] In this section, all statements pertaining to parents are applicable for caregivers and guardians as well.

will translate into parental support for setting one's own boundaries. This could play a powerful role in developing a sense of agency in the child. Hence, the focus is not monitoring, which implies a parent controlling a child, but both of them collaborating to enable healthy digital engagement.

This becomes the bedrock for all subsequent recommendations.

2 Mindful guidance of digital engagement from a young age

Given the early advent of digital engagement, ideally, systematic guidance could be initiated early (from 4 to 10 years of age) for helping set boundaries and enabling self-regulation. This study shows that some children begin to engage digitally at even 2 or 3 years. Hence, clear guidelines need to be established when the child is young, regarding screen time limits and permissible online activities. This will help in enabling healthy digital engagement, which could then remain in place as the children advance in years. Healthy and safe practices need to be instituted early. When the children are young, parents could personally engage with the children online, and actually play games with them; co-create content; discuss information accessed online, etc. This will help parents understand what their children are doing and will enable them to develop relevant guidance and support approaches. Just playing with the children offline is not enough in the current scenario.

3 Customise guidance to suit different ages, personalities and interests of the children

As children advance in age, the manner in which parents guide and support them in their online engagement can be modified. What worked for a five to six-year-old may not be suitable for an adolescent. Setting ground rules is required for young children. Once the child is older, able to converse and understand logic and consequences, rules and values online engagement can be arrived at by mutual agreement. The parents are then more likely to be followed by the child, reducing or altogether eliminating the need to monitor the child. Parents need to review how they support and guide their children based on their age, personality, interest and nature of digital engagement. Each parent could innovate by keeping these variables in mind. If the child does not adhere to the mutually

agreed upon approaches and values, this should be discussed with the child, and other suitable support mechanisms could be devised. Discussion, agreement on values and approaches, and being held responsible and accountable help children exercise their agency, feel a sense of ownership, and develop self-discipline.

4 Guide children towards self-regulation

Guiding children towards self-regulation is essential. This study amply reveals the children are keen to self-regulate, but many are not able to do this effectively, despite the best of intentions. If children are not able to self-regulate at any point of time (even after entering their teens), parents could discuss this and devise approaches where they can play a supportive rather than a controlling role. The parents need to be aware of the physiological impact of digital engagement, which is discussed in Section 1. Some of the reasons that prevent children from effectively self-regulating lie here. This can help make parents more empathetic and supportive.

5 Enable children to develop a sense of self that is not determined by the online world

Parents could try to support children in developing a sense of self which is not determined and dictated by digital engagement, but an awareness of one's behaviour, qualities, skills and creativity.

6 Encourage unstructured play from a young age

Offline engagements, especially unstructured play needs to be an integral part of childhood. Children, growing up in today's world, take regular recourse to digital devices for entertainment, especially when other modes of creative engagement are not made available to them. Lack of unstructured play could be one of the reasons for this. Unstructured play with other children creates lasting social bonds and enables creativity. This can provide a strong foundation for building a healthy sense of self and belonging.

7 Identify suitable offline activities

Open communication channels can help children and parents to identify suitable offline activities and hobbies that can be pursued, based on the available resources and children's interests. Sometimes, parents foist their offline interests and dreams onto their children. This is likely to make adolescents seek refuge elsewhere and the digital world can be an easy haven. An artistic child should not be forced into sports, and vice versa. Parents ought not to subscribe to hierarchical notions of attributing more value to any specific offline activity. There are multiple human intelligences and skills which are equally relevant. Acknowledging this can help children blossom and subsequently enable them to organically balance their offline and online interests and time.

8 Secure a measure of digital literacy

Parents and teachers could enhance their digital literacy (could be via the school; from NGOs; from experts) to better understand children's online activities. This enhanced understanding could play a powerful role in fostering healthy relationships within the family and in the school. It can keep communication channels open.

Further the digital literacy of all stakeholders including children could mitigate potential risks and empower informed decision-making in navigating the digital landscape.

9 Focus on mentoring

It is evident that online exposure can play a critical role in opening avenues for a child. This can also create some confusion with an overload of information. Exploration is recommended but a measure of mentoring could help focus the child. Parents who are good mentors are likely to be supportive rather than controlling. This can enable agency and responsibility in the children.

Often, parents are not equipped to play a mentoring role. They could seek the help of the school, experts and NGOs to secure the requisite skills. School teachers are known to be

highly influential in the lives of adolescents. They could play this role effectively. The teachers may require some training for this.

10 Role of mentors

Empathetic mentors (teachers, NGO staff, experts) can play a powerful role in guiding children from all backgrounds to easy and safe online access to information. This can improve the academic performance of students. They can also facilitate career aspirations and provide opportunities for growth. Exposing children to financial digital literacy with a small guided practical component can be useful. Children, especially those from less privileged backgrounds, wanting to create content online, may require mentorship and guidance to keep their digital engagement healthy. Encouraging them to explore diverse opportunities within the online creative community can foster growth and skill development. Collaborative efforts can establish clear boundaries and promote a healthy online presence.

11 Act as role models

Mentoring and guidance are effective when children see their parents as good role models. Parents need to genuinely apply similar norms and rules for themselves. If, for any reason, they are not able to adhere to these, they ought to explain why these aberrations arise.

12 Support children with diverse needs

This study reveals that children with diverse needs also actively engage online. The online space can be dangerous for all children and even more so for children with diverse needs. Systematic guidance on self-regulation methods can provide protection. It is important to set boundaries. Potential risks could be presented in accessible formats that will not generate fear but will promote healthy digital engagement.

The digital world can simultaneously be an empowering space, if navigated mindfully. Some parents are well-equipped to support and guide the child in their online engagements in a healthy manner, while others may not be. The school teachers can play a pivotal role in identifying which parents need external support. There are experts who can provide the requisite training or actual mentoring support to the children.

It needs mention that like all children CWDN also have varying intelligences and capabilities. Understanding and using these productively is possible through mentoring and guiding digital engagement.

13 Provide education on online safety

This study establishes that children, parents and teachers from all backgrounds require comprehensive education on online safety, including strategies for navigating cyberbullying, privacy protection, and responsible online behaviour. They need to become aware of laws, policies and available redressal mechanisms instituted by the state for this purpose. This could empower them to recognise and respond to potential risks effectively and at the same time, not bully, harass or be hurtful to others.

14 Learn to recognise signs of digital dependency and related mental health issues

The allure of the digital world has been well established, wherein an inability to disconnect from it, manifests in digital dependency and sometimes serious mental health issues. Parents need to learn how to recognise these signs and identify resources for addressing these.

This may require collaborations between parents, educators, and mental health professionals. When children display helplessness and admit to 'addiction', action ought to be initiated. Some schools have in-house counsellors who can play a role here. If the school is not equipped, professional support could be sought from mental health professionals or counsellors to address underlying emotional challenges and support children's overall well-being. An extremely important aspect is that parents should not feel stigmatised in talking about the challenges they experience in guiding their children's digital engagement. Further, mental health issues need to be acknowledged without bias

or prejudice in parent-teacher and peer group interactions. Mindful therapeutic interventions could be explored to address any negative impacts of digital engagement. This could help in guiding children's digital journey towards a harmonious equilibrium between virtual exploration and offline experiences.

These recommendations are to be considered an option, rather than a blueprint that would work for all parents, teachers and children. These highlight collaborations between multiple players: children, parents, caregivers and guardians, teachers, NGO personnel, counsellors, mental health professionals, and others. This study establishes that children are looking for support balanced with personal agency to navigate the online world, which can emerge from such collaborations.

CASE VIGNETTES

These case vignettes have been created by drawing from multiple sources: in-depth interviews from the concerned adolescents; information they shared during the PAR and FGD sessions and data given by their parents[34] during the survey. All the names of the children have been changed to ensure anonymity.

These widely varying stories speak of different types of digital engagement to reveal the multifaceted nature of this phenomenon. It is truly a world in itself, given all that it has to offer. These stories have been carefully curated to reveal that while different children are engaging with this world in distinct ways, the potential for healthy engagement lies within children from all walks of life. These case vignettes attempt to analyse why these distinct forms of online behaviour emerge and then make case-specific recommendations (many of which are relevant across the board) to enable and promote healthy engagement.

Vignette 1: She is 14 and Runs an Online Business

Cheryl Madhusudan is 14 years old and a student of Class 8 in an urban international school in Bengaluru. She lives with her parents in an independent villa. She does not have any siblings and most of her cousins live abroad. Cheryl's father is a Solution Architect in a multinational company. Her mother is a Human Resources professional. Her father has flexible work hours and operates out of home primarily. Her mother works from the office, usually from 8 am to noon and sometimes till 3 pm.

Cheryl has a few friends in the locality. She sometimes plays badminton, or practises maths with them, but does not engage with them in an unstructured manner.

Family time for Cheryl is about watching a movie with her father once a week; having dinner with her mother once a week; and a family breakfast at a restaurant on Saturdays. Both her parents usually work during school vacations, so family holidays are minimal. These happen, sometimes, during Christmas and Diwali. Thus, Cheryl spends a large portion of her time with digital devices.

Initiation of Digital Engagement

Cheryl began using the internet at less than five years of age. She got her own device by the time she was five years old. Currently, she has a smartphone and a laptop.

[34] The responses of the parents in the questionnaire have been reconstructed in the form of quotes to animate the case vignettes.

Nature of Digital Engagement

Cheryl said that she uses digital devices for multiple reasons: online gaming; general entertainment; education; and trading in K-Pop merchandise. Her mother indicated that Cheryl went online for the following reasons: socialising; entertainment (to play online games; to watch videos); information and learning; to pursue hobbies and interests; for media consumption; independent online shopping; online learning; and skill development.

Online gaming

According to Cheryl, *"I play Subway Surfers when I have nothing else to do. I also play Flow Free; Roblox and Minecraft when I have larger windows of time available to me. I find Roblox the most enjoyable. I have been playing this since I was six years old. It is very flexible and gives me many options, so I switch from one game to another in Roblox. I got to learn about all these games from YouTube."* She then went on to say that she plays all these games usually alone, but sometimes with friends from both the offline and the online world. She held that her parents are aware of what games she plays, but they do not play with her. Conversely, Cheryl's mother claimed that she knows that Cheryl plays games online but is unaware of what these games are.

Regarding the impact online gaming has on her, Cheryl said, *"I don't really care if I fare badly. I talk about these games to my friends and only when I score well, I share this information with them. There is no real benefit in playing these games."*

Online entertainment, communication and shopping

For general entertainment Cheryl accesses YouTube - to listen to music and to watch commentary videos (usually about celebrity dramas). She claimed that she likes to watch something while eating. For further entertainment, she goes to Instagram to watch reels and stories; to look at posts, repost reels; and create reels. It is the main way of texting her friends. She also mentioned using Instagram to avoid the fear of missing out (FOMO), *"I'm scared people are doing things that I don't know about."* She watches movies and shows on Netflix.

Mrs Madhusudan was aware of the apps and sites Cheryl accessed for entertainment. She also spoke of Amazon Prime Video, Disney + Hotstar, Discord, Spotify, Google, WhatsApp and Google Maps. She stated that Cheryl shopped independently on Amazon, Ajio, Instagram and Urbanic.

Online education

Cheryl indicated that she accessed multiple sites for educational purposes: Canvas, Gmail and ChatGPT. In addition to what Cheryl said, Mrs Madhusudan claimed that Cheryl also used Wikipedia, Mindspark, Google Classroom and Duolingo.

Cheryl held that recently, when she went for a Model UN (MUN), she surfed many newsletters and government websites. According to her, *"These were very useful."*

In terms of how she accesses and uses these websites, Cheryl stated that for the MUNs, the school guides them first on how to research and use certain sites. Her parents usually do not sit with her, but sometimes they make suggestions on where to find information. Occasionally, when she comes across some interesting information, she shares this with her parents or teachers.

According to her, the primary benefit of this exploration is that the commentary videos have made her more rational as these give her the opportunity to understand multiple dimensions of the same topic.

For business purposes

Cheryl runs a K-Pop business on Instagram. This involves trading in K-Pop merchandise like music albums. She heard about it through her friends, then begged her father to buy an album for her, which she later sold online. This is how her online business began.

Currently, Cheryl sources her products through other people, and then later trades these by advertising. She promotes products by sharing information about these with her friends and then asks them to further share this information in their online circles to increase reach. Her father usually ships the packages. Her father is very supportive, while her mother is not very involved because she is busy.

Cheryl usually earns Rs. 1,000 to Rs. 2,000 per month, though this can go up to Rs. 5,000 if there is a new release. She then repurposes the money she earns to promote the business and for her personal shopping. While she is happy running this business, she claimed, *"Sometimes I get overwhelmed if there is too much schoolwork. This interferes with my studies. Also, while running this business, there are challenges in verifying whether the products I am trading in are legitimate. It is easy to get scammed. After I send out the products, I worry about whether my clients have received them. Sometimes, when I place orders for products, I pay the money in advance, and then the vendor does not ship me the product. I also have to give my personal information to these vendors when I purchase items from other online stores on Instagram."*

Interestingly, Mrs Madhusudan made no mention of Cheryl's business.

Time Spent Online

Cheryl maintained that she spends 4 to 5 hours with her digital devices on weekdays (this includes time spent on her business), and 3 to 5 hours on the weekend. She sometimes

watches two movies in a row on the weekends. Mrs Madhusudan believed that Cheryl spends 2 to 4 hours online daily. She stated that Cheryl spent most of her time watching videos, engaging with social media platforms, browsing the net for entertainment and educational purposes. Cheryl's parents are not online to a great extent. They spend about 2 to 3 hours online on a daily basis. Their online activities include work, news and watching reels.

Cheryl was not comfortable with spending this large quantum of time online - *"I was better at academics when I spent less time online. Ideally, I would like to spend 2 hours online on a weekday and 3 hours on the weekend."*

Offline Engagements

Despite the extensive time spent online, Cheryl said that she spends about 2 to 3 hours per day on offline activities like playing badminton, attending tuitions, going to restaurants with family, and spending time with friends. Mrs Madhusudan believed that Cheryl spent 3 to 4 hours offline daily on reading, sports, art, and meeting friends.

Cheryl felt that offline activities kept her fit and got her out of the house. She would like to spend more time offline - *"I am unable to do so because I am exhausted after school, so I just end up checking my phone."*

Impact of Digital Engagement

Positive impact

According to Cheryl's mother, the overall impact on Cheryl was largely positive - *"It makes my child happy to be online. It has helped build skills that she can use now, and in the future. It has given Cheryl the opportunity to develop interests and is an outlet for her creativity. She now has easy access to very useful information. She has been able to build a community and/or many circles of friends that is not possible offline."*

According to Cheryl, being online, specifically on Instagram, has taught her about social media marketing, which has been useful for her business. She now knows how to market her products in a way that will grab attention. Cheryl agrees with the impacts listed by her mother, adding that she has been able to make many new friends on Discord.

Cheryl also feels that being online has helped her to relate better to her parents, *"It has helped me get closer to my parents, I am able to communicate more openly, and I send them reels."*

Being online also helped Cheryl build good relationships with her new classmates, before she joined school, *"I joined this school last year and a lot of children emailed me before I joined, and it made me really comfortable."*

Negative impact

Mrs Madhusudan felt that this digital engagement also came with a few negative effects. *"Cheryl does not want me to monitor the amount of time spent on online devices. Strangers have tried to contact her online. It has affected her sleep cycle. It has given her access to age-inappropriate content."*

Cheryl, on the other hand, spoke about the negative effects at length. She agreed with her mother about sleeplessness. In addition to this she claimed, *"It has ruined my attention span, it is hard for me to focus on things now. I have watched videos that show that all billionaires were C+ students. My standards have since gone down, and now I get less marks. I also find it hard to talk to people in real life, I am used to typing everything out. I have become anti-social, and I do not like to leave the house."*

Cheryl feels that social media often leaves her feeling drained, and she tends to overthink what people say online, as it is not as easy to read people's tones over a text message. Further, she shared that she feels afraid to voice her opinions online, for fear of being judged, *"When I watch a video and I see a lot of hate comments, I feel conscious about posting a positive comment because I'm worried about what people will say."*

Monitoring Cheryl's Digital Engagement

Cheryl stated that her parents have set password and time controls, but she knows how to override these. Besides this, there is not much monitoring. She does not need to ask for permission before visiting a site. Cheryl spoke of her attempts as self-regulation where she tried the following:

a. Deleted her apps to limit usage, but this did not last long.
b. Sometimes, she gives her phone to her father, but eventually ends up taking it back.
c. Setting a time limit to her screen usage, which has not worked too well either - *"I feel weird complaining about it, it is a weird problem to have, but it is hard."*

She honestly admitted that she is currently unable to self-regulate because she likes being connected with her friends online, and because she has nothing else to do.

Her mother agreed that she does not monitor Cheryl extensively. She sets the ground rules regarding time and content and trusts Cheryl to follow them. Cheryl shared that she feels guilty about being online when her parents attempt to monitor her.

According to Mrs Madhusudan, *"We understand the negative impacts of overdoing online engagement, but we as parents have also come to realise that preventing online access is just not an option. Today, most of the learnings and engagements are coming from online content. Full control and monitoring are also not possible. So, the best way is to talk to the child and be open about what and how much should be accessed and how it can be used productively."*

Aspirations and Future Goals

Cheryl envisions a multifaceted career trajectory, aiming to enter the fields of engineering or architecture to establish financial stability while nurturing her creative ambitions. Simultaneously, she harbours a deep-seated desire to explore script writing for films as a primary focus in the future. She sees her current K-Pop business endeavours as a passion project that she intends to sustain alongside her professional journey.

Cheryl draws inspiration from cultural icons like Shah Rukh Khan and narrative-driven shows such as The Romantics, leveraging her passion for media to explore the intricacies of film production. She studies Box Office reports to grasp the nuances of success and failure within the film industry.

The digital landscape plays a pivotal role in Cheryl's growth, as she harnesses online resources to direct her widely varying career goals and enhance her skill sets for future endeavours.

Case Analysis and Recommendations

This case vignette reveals that Cheryl's digital engagement is unhealthy and extensive. This conclusion can be directly attributed to the multiple negative impacts that she has cogently articulated. Both she and her mother do speak of positive outcomes as well, but the negative ones seem to predominate. There is evidence of this digital engagement affecting her physically, academically and impairing her ability to connect with friends and other people. She lacks confidence in stating her opinions openly, as she fears adverse online responses.

One of the reasons for extensive engagement can be attributed to Cheryl's family background with an absence of siblings, and extremely early device possession. Thus, she spends large periods of time either alone or with adults, making her seek digital devices, which are now easily accessible.

Recommendations

1. ***Enable the child to build strong friendships***
   In this digital era, parents who have single children could make a conscious effort

to create the circumstances for children to develop strong friendships from a young age.

2. ***Encourage unstructured play***
   From the time children are small (3 to 4 years of age), encouraging unstructured play is important. This could help them to form organic, healthy and strong relationships, which can give them confidence and a sense of self-worth. It could also provide them with perspective and an ongoing reality check.

Cheryl's background reveals that she comes from a wealthy family. Hence, she did not need to get into business for financial reasons. Yet she opted to do so, which brought with it some minor and major challenges, putting further pressure on her. Running a business and earning money could be regarded as a major achievement for one so young, but it does not seem to have given Cheryl confidence or a sense of well-being.

Recommendations

1. ***Parents could give due thought to young children initiating business enterprises***
   When children seek to engage online for business purposes, parents could educate themselves of the manner in which this can impact their well-being. Informed decision making around whether children under the age of 18 need to be earning money at all could be a part of parental thought processes. The parents could weigh the pros and cons, and then take an informed decision before giving their children permission to engage in independent online financial ventures.
2. ***Expose the child to financial literacy***
   Exposing children to financial literacy with a small guided practical component could be useful. The parents could inform the children from the very outset that acquiring business skills is more important than actually earning money, as they will be earning money as adults.
3. ***Conduct discussions on the child's business ventures***
   This is a critical growth phase for children when they need to keep their childhood and sense of well-being intact. The parents could support the child in the business engagement, so that they are aware of how this is playing out. Through open communication, parents and children could together decide, or guide the child on how much time to spend on the business, how to balance the business with other social activities and academics.

This case vignette reveals that Cheryl's parents do not believe in extensive monitoring and prefer to set ground rules, and then trust her to adhere to these. While this is a laudable approach, it could work under some circumstances, but not all. In Cheryl's case, her mother

made no mention of Cheryl's online business. She could be unaware of it because of her monitoring style. Further, there seems to be a measure of disconnect between what Cheryl claims and what Mrs Madhusudan says about the amount of time Cheryl spends online and what she does online. Cheryl is keen to spend more time offline but does not seem to have the wherewithal to do this without support. This speaks of the need for parental intervention, and the need for parental support and guidance.

Guiding and supporting children's online engagement is a complicated task that needs finesse and thought. In Cheryl's case, the trusting approach of her parents led her to adopt multiple strategies to self-regulate her digital engagement. She admitted that none of these worked, thereby warranting parental intervention.

Recommendations

1. ***Systematic guidance at a young age***
   Setting guidelines when children are young (from the ages of 4 to 10) helps enable healthy digital engagement, which can remain in place as the children advance in years. Good practices could be instituted in the early years. Parents could personally engage with the children online and actually play games with them, when the children are young. This will help parents understand what their children are doing, and will enable them to develop relevant methods to support and guide the child. Just playing with the children offline is not enough in the current scenario.
2. ***Customise guidance to suit different ages, personalities and interests of the children***
   The manner in which parents guide children can be modified as children advance in age. What worked for a five or six-year-old may not be suitable for an adolescent. Setting ground rules may work for some children, but not for all. Parents can review and modify the manner in which they offer guidance and support, based on the children's age, personality, interests and nature of digital engagement. Each parent could innovate their strategies, keeping these variables in mind.
3. ***Guide children towards self-regulation***
   Guiding children towards self-regulation could promote self-reliance. If some children are not able to self-regulate at any point of time (even after entering the teens), parents could discuss this and devise approaches where they can play a supportive, rather than a controlling role.
4. ***Keep communication channels open***
   The parents could keep communication channels open. This could also enable receptivity to parental guidance.

5. ***Create suitable offline options***
   Providing guidance could also come with suitable options of what the child can do apart from using digital devices.

Cheryl's description of her future goals indicates these are likely to pull her in different directions. Online access has opened multiple avenues for her, which could be useful or an information overload.

Recommendations

1. ***Provide mentoring support***
   It is evident that online exposure can play a critical role opening avenues for a child. This can also create some confusion with an overload of information. Exploration is recommended but a measure of mentoring could help to focus the child. The school teachers and parents could be trained to play an effective role in this regard.

Vignette 2: 'I Can Control My Digital Engagement'

Sandhya Rao is a 13-year-old student currently enrolled in Class 8 in an urban private CBSE school located within a short walking distance from her apartment in Bengaluru. She lives with her parents, a homemaker mother, and a father who works as a software engineer. He often works from home. She has a younger brother who studies in Class 3. Her two best friends stay in her apartment complex. She is a keen footballer.

Despite busy schedules, family time typically involves weekend outings to the mall, although these are occasionally adjusted around Sandhya's football practice. She maintains a close bond with her family.

Initiation of Digital Engagement

Sandhya began her digital engagement when she was around 12-years-old by utilising her parents' devices primarily for educational purposes. Currently, she has a phone without a SIM card, which she can use only in Wi-Fi spaces.

Nature of Digital Engagement

Sandhya mentioned that she got her first phone when she was in Class 7 (age 12) during her summer vacations. She would watch videos incessantly and then feel guilty about it. She realised the extent to which she used her phone to watch videos when her mother asked her not to use her phone for an entire day. She decided to get rid of her phone, and her mother supported her. She started focusing on her hobbies like painting and cooking.

She felt it is not easy being so disciplined because, *"Sometimes I feel left out. I don't know what my friends do online. But other times, I feel that it is probably a good thing that I'm not there."*

Sandhya stated that currently, her digital engagement is predominantly driven by educational objectives. She also visits online sites to enhance her creativity, listen to music and develop her football skills. She does not play any online games as she has no interest in these.

Her father reiterated this by maintaining that she goes online for learning and accessing information and seeking support and advice. She also uses it for pursuing her hobbies, and occasionally for entertainment.

Online education

Sandhya uses Mindspark to attempt multiple-choice questions on subjects like Maths, Science, and English. She finds Google useful for writing English essays and Britannica for school assignments. According to Mr Rao, she also uses Wikipedia, which Sandhya refuted. Her mother used to guide her on how to use websites until Class 5. Now, Sandhya goes online independently to do her project work. Currently, neither parent sits with her when she is online, but they do help when required.

Online entertainment and pursuing hobbies

Sandhya shared how she peruses the internet for entertainment - *"I turn to Pinterest and Google for creative inspiration related to art, sketching, cooking and crafting. I love these two sites. I also go online to listen to music on Amazon Music and watch Naaz Daily for inspirational stories. I enjoy watching The Mermaid Scales on YouTube Shorts. My coach has advised me to watch football videos online to improve my game."* This information from Sandhya closely aligned with what her father said.

Time Spent Online

Sandhya stated she spends about 30 to 45 minutes per day online to complete her assignments. Her father maintained that she uses her digital devices for about 1 to 2 hours. Apart from educational sites, she does not use the other online platforms she mentioned earlier, on a daily basis. She watches Amazon Prime Video for 1 hour on the weekend. *"My cousin told me that I am the role model in my house, so I often treat myself once in a way with non-educational online time."*

Offline Engagements

In contrast to her measured online activities, Sandhya values extensive offline engagements. She spends at least 2 hours a day in the following activities: reading, writing, travelling, meeting friends, sitting and doing nothing, indulging in art, and football. She devotes significant time to football, which was inspired by her father's passion for the sport. She spends at least 1 hour a day on football - *"I saw my father playing football and was inspired to play it myself. I am now a part of the school football team, and I also have a coach outside of school. I am very happy when I'm practising football."*

She finds solace in painting - *"I overthink a lot. I paint to overcome this. My paintings are a medium to channel my thoughts."*

Sandhya stated that her offline time had decreased of late because of schoolwork.

Impact of Digital Engagement

Positive impact

It is evident that the impact has been primarily positive on Sandhya as she goes online for limited periods and consumes primarily educational and hobby-related content. According to Mr Rao, it has given Sandhya easy access to very useful information and has thus improved her academic performance. It has built skills that she can use now and, in the future. It has also provided an outlet for her creativity.

Negative impact

Based on her early engagement with her phone, Sandhya stated that, *"It can be addictive and a waste of time. I start with doing work, and then lose focus by getting sucked into unnecessary things."* This has made her both conscious and careful. Her father felt that being online makes Sandhya easily distracted.

Monitoring Sandhya's Digital Engagement

Sandhya stated that her parents do not employ strict monitoring tools. They have not set up passwords or time controls. They do not monitor the sites she visits. Nobody watches her when she is online. They used to guide and monitor her as a child, but now, nobody sits with her when she is online.

Mr Rao claimed that he and Sandhya's mother set the ground rules regarding time and content, and then trust Sandhya to follow these. They also periodically check the amount of time she spends online.

If any minimal monitoring occurs, it is done by Mrs Rao - *"When I am online for entertainment, I know I must stop if my mother just stares at me. And I do stop."* Though Sandhya stated that she does not mind this minimal monitoring, she contradicted herself by saying, *"I feel a little annoyed about being monitored because my digital engagement is limited as it is. I pick up the device only when my mother allows me, otherwise I feel guilty."*

Sandhya self-regulates her online time, limiting herself to about 30 to 45 minutes daily for completing school assignments. She acknowledges the potential addictive nature of digital engagement but maintains confidence in her ability to control her usage - *"I can control my digital engagement, even without my mother's inputs."*

Digital Engagement Atmosphere in the Home

Sandhya does not regard her parents as role models in terms of their digital engagement - *"My father is in software, and he has to go online for his work for long periods. He uses his*

devices in front of me, but it does not bother me because I know why he uses these. I am interested in arts and crafts. I don't want to be online."

Sandhya felt her parents were more lenient with her younger brother - *"My brother got a ChromeBook for online classes during COVID. He used it extensively. My mother would sometimes ask him to stay within the time limit, but he would use it past that without many repercussions. My brother used it so much at one point that his online engagement is now monitored very strictly."*

Aspirations and Future Goals

Sandhya aspires to pursue a career in sports, inspired by her parents' encouragement and her own passion for football. She recognises the value of both online and offline pursuits in achieving her aspirations, leveraging the internet for creative ideas while embracing physical activities for personal growth.

Case Analysis and Recommendations

This case vignette sees Sandhya as a commendable role model for balanced digital engagement. She is an ideal role model because she experiences temptations like most children, but she has been able to overcome these through her willpower and with the support of her parents. They have played a pivotal role in helping her develop self-regulation skills and allowing her to navigate online temptations mindfully. Her ability to prioritise educational and creative pursuits while maintaining a healthy offline lifestyle exemplifies a proactive approach to adolescent digital literacy. She displays a harmonious blend of online learning and offline experiences.

Recommendations

1. ***Delayed access to the online world and digital devices***
   This case study reveals that Sandhya's delayed access to the online world could have played a pivotal role in regulating her digital engagement as she had the requisite maturity by then.
2. ***Systematic and effective guidance***
   This approach adopted by Sandhya's parents is worth emulating as it presents a combination of systematic and effective early monitoring to enable mindful engagement and self-regulation. It needs mention that this approach may work under some circumstances but not under all. One size fits all approach cannot be adopted as different children are likely to respond differently.
3. ***Customise guidance to suit the child***
   If setting the ground rules and trusting children to engage online mindfully do not work, then suitable ongoing ways of guiding the child could be devised. These can

be discussed with the children and efforts could be made to ensure that these are received positively.

4. ***Identify suitable offline activities***
   It is important to identify suitable offline activities, based on children's interests.
5. ***Enable children to develop a sense of self which is not determined by digital engagement***
   Care must be taken to ensure that children's sense of self is not built by digital engagements but through activities in the real world.
6. ***Keep channels of communication open through active listening***
   Efforts could be made to keep channels of communication open, and parents can engage in 'active listening' if they expect children to 'listen' to them.

Vignette 3: Navigating the World of Minecraft and YouTube as a Rising Influencer

Sulaimaan Ahmad is a 16-year-old student studying in Class 8 in an English medium urban government school in Bengaluru. He resides in a rented house with his parents, elder sister, and her husband. His father is a contractor, and his mother is a cook. His school is a 15-minute bus ride from home. He does not have any neighbourhood friends. According to him, *"People around me smoke and drink, and are not very safe."*

Family time is primarily about eating meals together.

Initiation of Digital Engagement

Sulaimaan started his digital engagement when he was around 12-years-old. He got his own phone when he was 13-years-old. His mother knows he has a device, but she is not sure what it is.

Nature of Digital Engagement

Sulaimaan's digital engagement comprises playing games; watching coding and gaming videos; making and editing videos; visiting social media sites; watching educational videos and running a YouTube channel. His mother is aware that he spends time online but is unaware of what he actually does; which apps he uses; what sites he visits; and what games he plays. She does not know about his YouTube channel or why he spends time online.

Online gaming, editing, entertainment and social media

Sulaimaan was introduced to online gaming through YouTube. He plays games with the intention of uploading them on YouTube, rather than competing with anyone else. His favourite game is Minecraft. He also plays Free Fire. He uses Discord for online gaming. He plays these games unsupervised. He uses YouTube for watching gaming videos.

Sulaimaan uses the following apps to make and edit videos and photos: VN Editor, CapCut and BG Remover. He subsequently uploads these videos on his YouTube channel.

He uses X (formerly Twitter) to report any account hacking on YouTube to help other YouTubers retrieve their accounts. On Instagram, he likes and shares posts and reels.

Online education

Sulaimaan goes to YouTube to learn how to code. He does not access significant educational content online, except for watching videos his teachers share.

Attempts at earning money online

He is also trying to earn some money by designing t-shirts. He wants to sell them on Printful. He has earned $2, but it has not been deposited into his parents' account.

Sulaimaan's YouTube channel

Sulaimaan started a YouTube channel in 2022, where he uploads Minecraft videos. Since then, he has amassed over 1,000 subscribers. He makes and edits all his videos on his phone - *"You don't need a fancy device to be able to make and edit videos for YouTube. Anyone can do it if they have the knowledge on how to do it."*

He has also digitally secured his YouTube channel to prevent it from being hacked. Regarding the comments on his YouTube videos, he added, *"I get good comments and bad comments on my YouTube videos."*

Time Spent Online

Sulaimaan claimed that despite all his online activities he spends only one hour per day. His mother stated that he spends less than an hour.

Offline Engagements

Sulaimaan claimed, *"I enjoy spending time with my family and friends offline, exploring new places and trying different food. Offline interactions are important to me."* His mother, however, held that he spends time with friends and family only occasionally. She felt that offline engagements are essential for a balanced lifestyle. Children should focus on studies, work, and earn money.

Overall Impact of Digital Engagement

According to Mrs Ahmad, being online has had no impact on Sulaimaan. He himself indicated that the impact on him was largely positive, with a small measure of online weariness. It has effected multiple changes in Sulaimann's life. His YouTube channel has brought him many followers which would not have been possible in the offline world. He has acquired all his editing skills, as well, online. This has made him a successful YouTuber. Creating videos has allowed him to channel his creativity and share his passion for gaming with others. The positive comments from viewers keep him motivated to continue.

"We are moving towards a tech-dominated world. It is important to keep up."

Monitoring Sulaimaan's Digital Engagement

Sulaimaan seems to be effectively self-regulating as he stated that, *"My parents don't monitor my online activities closely, but my mother has advised me to limit my phone usage to*

one hour daily. I prioritise my academics over excessive screen time." His mother agreed with him.

Aspirations and Future Goals

Sulaimaan wishes to have a future online - *"I want people to know about me. I want to become a successful YouTuber like Total Gaming and Techno Gamerz (Indian gaming YouTubers). I would also like to eventually monetise my channel and earn money. The online world will help me achieve my goals."*

Case Analysis and Recommendations

This case vignette is an interesting one for multiple reasons. Sulaimaan's journey as a Minecraft enthusiast and burgeoning YouTube influencer highlights the transformative potential of digital engagement for personal growth and self-expression. It reveals how digital engagement can play a powerful role in levelling the playing field for adolescents from varying socio-economic backgrounds. It is also evident that despite a significant online presence, Sulaimaan has successfully regulated his digital engagement with minimal monitoring by his parents. This could also partly be attributed to relatively late engagement with digital devices and a measure of personal mindfulness. Mrs Ahmad came across as largely unaware of the nature and quantum of her son's online activities primarily because she does not possess the required digital literacy.

Recommendations

1. ***Provide mentoring support to promote creativity***
   Creative children like Sulaimaan require mentorship and guidance to reach their potential, and to keep their digital engagement healthy. Encouraging him to explore diverse opportunities within the online creator community can foster growth and skill development. If the parents are not able to do this, teachers and/or senior peers could play a role. Collaborative efforts can establish clear boundaries and promote a healthy online presence.
2. ***Develop mechanisms to promote digital literacy for parents***
   Parents lacking in digital literacy need inputs (could be via the school or other experts from NGOs) to better understand their children's online activities. Digital literacy and online safety can mitigate potential risks and empower informed decision-making in navigating the digital landscape for both parents and children. This can play a powerful role in fostering healthy relationships within the family. It could also positively impact the nature of family time.
3. ***Balance offline engagements with online pursuits***
   Sulaimaan does not seem to have very clear offline hobbies and interests. These could be cultivated to ensure that digital engagement does not begin to dominate

later.

4. ***Promote online educational engagement***
   Sulaimaan uses online resources very minimally for educational purposes. Efforts could be made to prioritise this. Easy access to information can play a pivotal role in improving the academics of students of all backgrounds.

Vignette 4: Digital Engagement for Income Generation and Educational Growth

Manjunath, aged 15, is a student of Class 9 in a rural government school in Bengaluru. His school is at a distance of 8 kilometres from his home.

He lives with his mother, one older sister, one younger sister, a maternal uncle, and a cousin in a rented house. His father died by suicide a few years ago.

His mother, the main breadwinner, works as a daily wage worker with varying hours and at different locations. She works from 8:30 am to 6:30 pm. Sunday is her weekly holiday. Her wage is Rs. 650 per day. Manjunath supports his family by substituting for his mother when she is sick. This could be on school days, as well. He also works as a construction labourer during weekends, earning Rs. 950 per day.

For him, family time is about eating meals together on weekdays, usually not more than half an hour a day. During holidays and weekends, they go to the temple together.

Type of Device and Nature of Digital Engagement

Manjunath has his own smartphone. He contributed Rs. 10,000 and his mother gave him Rs. 5,500 towards the purchase of this phone. Manjunath used to engage in online gaming. He has now transitioned to more productive online activities.

He uses his phone to get construction-related jobs. Therefore, it serves as a means to earn money.

He goes online for video and photo editing of wedding photos and for personal projects. He finds this the most enjoyable.

He also draws designs and creates artistic content digitally. He occasionally turns to Instagram for camera information and sharing photos and videos.

His educational engagement comprises using the Deeksha App for notes, drawing references, for Maths and other academic studies. He also uses Google to copy notes for class, and to learn English, Hindi and Kannada grammar.

Time Spent Online

Manjunath spends approximately 30 minutes online when his mother is present, and longer durations (up to 2 hours) when unsupervised in the evening or on weekends. Most of his online time is spent editing videos and photographs.

Offline Engagements

Despite his digital interests, Manjunath maintains a healthy balance between online and offline pursuits. He actively participates in games like *kabaddi*, cricket and throwball with friends. He spends about half an hour daily and about 4 to 5 hours on the weekends. He stated that, *"I do not want more time for these activities. I want to be online more."*

Overall Impact of Digital Engagement

Manjunath felt his digital engagement comes with both positive and negative effects. On the positive axis, he stated that he has been able to develop significant skills in photo and video editing, fostering creativity and learning. *"I am also able to keep in touch with my relatives whom I don't meet regularly."*

In terms of the negative effects, he attributes weight gain to excessive phone use, impacting his physical activity and participation in sports like *kabaddi* tournaments.

Monitoring Manjunath's Digital Engagement

Manjunath's phone usage is monitored by his mother and uncle. His mother has no digital engagement at all. Nobody gives him a time limit, but he usually restricts himself to 30 minutes a day, which can occasionally stretch to 2 hours on the weekend. On one occasion, when he used his phone excessively, his uncle thrashed him. Since then, his mother has begun locking the phone to limit usage. *"I follow my mother's monitoring rules. Earlier, I would get irritated, but I have adjusted to it now. I am confident that I can self-regulate. I use my phone for an hour, and then I can stop myself."*

Aspirations and Future Goals

Manjunath wanted to become a policeman, but his mother cannot afford the fee, so he has given up on that dream. He dreams of opening a photo studio. He feels that both online and offline worlds can help him achieve his entrepreneurial goals.

Case Analysis and Recommendations

Manjunath's digital engagement can be regarded as primarily healthy. His case underscores the potential of digital engagement for financial responsibility, educational and creative growth. His phone is a source of income, and not an entertainment or communication device. His academic and work responsibilities highlight his determination and resilience despite personal challenges, pertaining to his socio-economic background, and the personal tragedy of his father's suicide. Special mention needs to be made of his ability to self-regulate his digital engagement when it could have easily become an escape from the grim realities of his life. Manjunath has leveraged digital resources to cultivate valuable skills and pursue his aspirations in a rural context.

Recommendations

1. ***Provide suitable mentoring support***
   Guidance and mentoring inputs could help children like Manjunath access pathways to achieve their life goals. Children from a rural background may need the school to play a pivotal role in this regard, as the parents are unlikely to be equipped for this task. If rural schools do not have the requisite resources for the same, then efforts can be made to explore community-based resources and NGOs to facilitate these career aspirations and provide opportunities for growth.
2. ***Promote offline activities***
   A special focus on the promotion of physical activities to offset sedentary online behaviour could improve overall health, as some children from a rural background can very easily succumb to the allure of digital devices.

Vignette 5: Opening a Window to Online Trading and E-Commerce

Prateek Narayan is a 16-year-old student attending the Learning Centre for Children With Diverse Needs in Bengaluru. He is a child with a specific learning difficulty (SLD). He lives 2 hours away from his school and uses the metro to commute.

Originally from Belgaum, he now lives with his uncle (Shyam Narayan), aunt, cousins and maternal grandmother in Bengaluru to pursue his education. His immediate family continues to reside in Belgaum. His father works as a rice merchant, and his mother is a homemaker. Prateek's uncle (Mr Narayan) is an engineer, and his aunt manages the household.

Initiation of Digital Engagement

Mr Narayan stated that Prateek's digital engagement began at around 12 years of age. Prateek received his own smartphone at the age of 15, enabling him to engage more independently in digital activities.

Nature of Digital Engagement

According to Mr Narayan, Prateek goes online for entertainment; socialising, accessing information; online learning; pursuing hobbies; and skill development. In addition to this, Prateek stated that he studies the stock market and is learning about e-commerce. His uncle made no mention of this.

Online entertainment

Prateek engages in online gaming, watches videos and communicates with people online. Prateek stated, *"I play BGMI, but now I am busy studying for exams, so I don't get the time for this anymore. When I play, it is by myself. Nobody sits with me."* His uncle believes that his online gaming includes BGMI, Minecraft, Ludo and Carrom. Mr Narayan held that Prateek watches videos on YouTube and Instagram. Prateek elaborated that these videos were primarily interviews of rich people, politicians, and sportspersons.

Regarding social media, Prateek maintained that he opened his Instagram and X accounts after he got his own device. His uncle assumed that in addition to these, Prateek also used WhatsApp, Facebook, Snapchat and YouTube.

Online education and learning

Prateek mentioned accessing Wikipedia, ChatGPT and Google Classroom for learning. Mr Narayan agreed with this.

Understanding the stock market and e-commerce

Prateek revealed that he enjoys looking at trends in the stock market. He shared, "*I study chart patterns and review candlestick charts."* He also uses simulation websites where he invests without using real money - *"Currently, I am not investing in anything, but I am learning how this can be done. I would like to start investing after I turn 18 and complete my education."* He got to know about this by himself when he was looking up things to do online. He is inspired by Harshad Mehta and his wealth.

He is also keenly interested in learning about e-commerce, how to create a website and sell things online. He gave the example of Shopify, wherein one can create a website to sell goods; place advertisements on Facebook, Instagram, and earn money from buyers. He added, *"I recently learned about drop shipping and paper trading."*

Both these are his favourite online activities.

Mr Narayan made no mention of Prateek's interest in the stock market and e-commerce.

Time Spent Online

Prateek said he spends 1 to 2 hours online daily, while his uncle maintained that it is 2 to 4 hours. He believed that Prateek spends most of his time playing games, watching videos and browsing the net for educational purposes and accessing information.

Offline Engagements

Prateek indicated that he spends 4 hours a day offline which has now reduced to around 2 hours, as he is studying for exams. His uncle agreed with this. Despite significant online activity, Prateek engages in offline pursuits such as playing cricket, going for cricket coaching, reading, and analysing customer service in shops and playing with his cousins. He admires cricketers like Jimmy Anderson and Virat Kohli.

Overall Impact of Digital Engagement

Mr Narayan believed that the impact of digital engagement was largely positive for his nephew. It has built skills that Prateek uses now and will use in the future. It has given him access to very useful information and improved Prateek's academic performance. As a child with diverse needs, it has played a role in inclusion. It has helped Prateek to engage with children without disabilities in an equal manner.

Though Prateek has used digital devices very productively to enhance his access, skills and academic performance, he spoke at length about the negative effects.

"Instagram was very distracting for me. I felt very trapped by it because I felt like watching reels all the time. I have deleted it myself because of this."

He then went on to say that his friends taught him how to hack accounts. He mentioned how his account got hacked by somebody in the USA, and how he addressed this with counter hacking. *"I don't do that anymore because I know that hacking is illegal. But I might still do it if someone troubles me online."*

Monitoring Prateek's Digital Engagement

It is interesting to note that Prateek's father monitors him remotely from Belgaum. His uncle and aunt do not play this role. His father has access to his Gmail account and can track the apps he downloads. He also occasionally asks Prateek about his online activities. Regarding this, Prateek stated, *"I am comfortable with my father knowing what I do online. It helps me stay responsible with my digital usage."*

Prateek himself engages in a measure of self-regulation. *"I can control my digital usage. I set a time limit on different apps. I get a notification when the time is up, and I adhere to this."* He made some suggestions for self-regulation - *"Delete Instagram first, and avoid watching YouTube, unless it is something educational."*

Aspirations and Future Goals

Prateek dreams of becoming a cricketer and believes that technology and online platforms can assist him in achieving his goals. He uses technology to improve his cricket skills by uploading videos for analysis and feedback. He also wishes to pursue a career in online trading and maybe start an e-commerce venture. *"The future is online. Technology is growing, many jobs are now online, and AI is growing, too."*

Case Analysis and Recommendations

Prateek makes for an interesting case. As a child with diverse needs, he has navigated the online world carefully, and utilised the resource in a positive manner. It may have even played a critical role in levelling the playing field with other children. His digital engagement is mindful and measured with a focus on educational and skill-building activities, alongside leisure pursuits like gaming and social media use. His interest in the stock market and e-commerce reflects a proactive approach to learning and future planning. His productive online engagement makes him a role model.

Recommendations

1. ***Useful case study on healthy digital engagement***
   This is a useful case study on healthy digital engagement, which could be shared with children with or without diverse needs, from all socio-economic backgrounds and different geographical locations.
2. ***Develop skills in different categories of children to access information for career options***
   For children with diverse needs, this can open interesting pathways. Not all children are necessarily interested in online trading and e-commerce, but they could be encouraged to articulate their interests to explore whether it is possible to get related information and opportunities online.
3. ***Provide mentoring support***
   Effectively mentoring children like Prateek who already have cultivated their own interests, can play a pivotal role in building these interests and self-confidence. If the caregivers and parents are not in a position to do so, the school could play a role by either mentoring the children or by bringing in experts to do the same.
4. ***Promote offline hobbies and interests***
   Promoting offline activities is important, especially if the child is already inclined towards these. This could proactively prevent the digital world from taking over.

Despite being Prateek's primary caregiver, the uncle is not completely aware of the nature of Prateek's digital engagement or the quantum of time he spends online. He is an engineer by profession, so he does have the wherewithal to play a more active role in understanding and supporting Prateek's digital engagement. He has also not taken on the task of monitoring Prateek, which is done by his father remotely. As a result, Prateek largely monitors himself, which further makes him a good role model. Despite positive impacts on skill development and academic performance, Prateek acknowledges challenges such as distraction from social media and the potential negative impact of excessive screen time.

Recommendations

1. ***Develop varying capabilities in different categories of children***
   Children with diverse needs have varying capabilities. Understanding and using these productively is possible through mentoring children and providing support and guidance on healthy digital engagement.
2. ***Develop mindful approaches to guide online engagement***
   The minimal monitoring in Prateek's case does not seem to have adversely affected him. It has instead made him the locus of control and has given him agency. It cannot be assumed that this will happen for all children. The online space can be dangerous for all children and even more so for children with diverse

needs. Guidance on self-regulation methods can provide protection. It is important to set boundaries. Potential risks could be presented in a format that will not generate fear to promote healthy digital engagement.

Vignette 6: Manoeuvring the Digital Abyss

Avinash Das is a 12-year-old student in Class 6 at an English medium urban government school in Bengaluru. He lives in a rented house in an urban area, 1 hour away from his school. His family comprises his mother, father, sister and cousin. Avinash's father, employed as a masseuse at Urban Company, operates on a flexible schedule. This contributes to the irregularity in their daily routine. His mother is a homemaker. Avinash's cousin is a car designer.

He does not have any friends in the neighbourhood. Family time is about eating meals together.

Initiation of Digital Engagement

Avinash embarked on his digital journey as a young 6-year-old. He acquired his smartphone at around age 10. He also has a tablet exclusively designated for educational content from Byju's. His early immersion into the digital realm laid the groundwork for a multifaceted interaction with technology.

Nature of Digital Engagement

According to Avinash's mother (Mrs Das), he goes online for entertainment (playing games, watching videos), communication (browsing social media platforms), and for accessing information and supporting educational pursuits. Avinash added, *"I get to learn new things, I am able to upload my gaming videos and access the lowest shopping prices in the market."*

Entertainment (online gaming, watching videos and vlogs)

Avinash spends a large quantum of his online time gaming. This seems to be his primary focus. *"I love Minecraft. I also play Stumble Guys. I have 20 GB per day, so I never run out of data. I play as much as I like."* Avinash himself acknowledges the allure of online gaming. *"I use all methods to beat other players."* This sentiment underscores the competitive nature of his digital engagement. Mrs Das' opinion was that apart from gaming, he does not browse the net for other forms of entertainment. However, Avinash said, *"I also enjoy watching vlogs on YouTube."*

Online communication

Avinash is active on multiple social media platforms: WhatsApp, Instagram and X. He also uses Omegle[35] for video chatting. His mother is unaware of this aspect of his digital engagement.

[35] He uses a fake Omegle website, since the original one was shut down in November 2023.

Online education and learning

Mrs Das believes that Avinash primarily uses WhatsApp, Google and YouTube for educational purposes. Avinash elaborated on this by stating, *"I learnt about Python from YouTube and my cousin. I also use Replit and Mimo for coding. I use Magnet Brains and ChatGPT for completing my school assignments."*

Time Spent Online

Avinash devotes a significant portion of his time to digital activities, averaging 4 to 5 hours daily, escalating to 8 hours on weekends.

"On weekdays I feel very excited when I reach home. I first watch TV, eat, and then I pick up my phone to play games. I study a little and then use my phone again."

Mrs Das' perspective on his screen time differs, estimating his usage to be within 2 to 4 hours daily. She highlights concerns over his academic performance, attributing it to his excessive digital engagement.

Offline Engagements

In offline pursuits, Avinash's social circle is limited, lacking companionship beyond his immediate family. He claims his mother is always watching serials online.

He occasionally partakes in traditional pastimes, such as playing Ludo or going to the park, albeit infrequently. He spends approximately 1 hour daily in offline pursuits.

Overall Impact of Digital Engagement

According to Mrs Das, Avinash's digital engagement has had a largely negative impact on him. She attributes his dwindling academic performance to excessive screen time. She also has reservations regarding his online activities, particularly concerning incidents of encountering online toxicity within game chats. *"When playing online, people send rude messages on the game chat, which young children should not be subject to."* She added, *"When I got him a phone, I did not think he would be so addicted. Now I want to take his phone away. He uses his phone as soon as he comes home from school. Then he is on his device again after watching TV and after studying."* This closely resonates with what Avinash stated.

Avinash's conflicted sentiments mirror a nuanced interplay between the perceived advantages and pitfalls of his digital immersion.

He felt that games such as Minecraft and Stumble Guys foster connections with global players and enhance skills in survival and strategic thinking. *"By using Python, I have learned to make animations and movies."* He spoke of other benefits like, *"After using social*

media, I have learnt to chat with people a little better, type faster, and I am now better at framing sentences. 20 percent of the English I know is from playing games and using my mobile. I can talk to my friends when I feel sad, and then that makes me happy." He also went on to highlight the educational opportunities afforded by his digital pursuits.

However, he also acknowledged the negative aspects, expressing, *"I feel bad when people don't follow me or respond to my posts. I also experienced an unpleasant situation when a stranger contacted me online."* He admitted helplessly, *"I am trapped by the online world. Without my phone, I am nothing. I am addicted to my device. When I got my phone, I was very happy. Later, I started feeling that it was unnecessary."*

Monitoring Avinash's Digital Engagement

Avinash's digital escapades undergo intermittent scrutiny, primarily orchestrated by his brother, who utilises 'ethical hacking' to monitor his online activities. *"My brother monitors my phone usage. If I use my phone for too long, he turns off all the apps".* Avinash also said that occasionally, his parents confiscate his phone. Mrs Das claimed that she checks the type of games he plays and the amount of time he spends online.

Avinash's responses to being monitored fluctuate between compliance and defiance, reflecting the inherent tension between parental oversight and adolescent autonomy. *"I confess that I get irritated when I am monitored, and then to deal with this, I go to my uncle's house to play online games."* He also indicated that it upsets him when his parents berate him for being online when they are unaware of what he is using his phone for. *"Very often, I am studying online, and they still shout at me."*

Despite acknowledging his excessive screen time, Avinash grapples with the challenges of self-regulation, seeking external interventions to curtail his digital indulgence. *"I ask my mother to keep my phone with her so that I am not tempted to use it. But then within five minutes, I ask her to give it back to me. If she is in a good mood, she returns it."*

Regarding self-regulation he stated, *"I try to self-regulate, but my mind wanders to my phone. I feel like I can't study without my phone."* He stated that he would like assistance with self-regulating his internet usage. In the past, he has attempted to make a timetable for himself, but has not been able to follow it.

In terms of putting forth recommendations on how to address the problems that children like Avinash may be facing, Mrs Das stated, *"Do not give children a device until 10th standard. It should be used for educational purposes only. Parents should spend more time with their children."* This reveals a measure of dissonance between what she suggests and what she practises, given her penchant for watching serials.

Case Analysis and Recommendations

Avinash's digital engagement reflects a multifaceted interaction with technology, encompassing online gaming, educational pursuits and social media interactions. His immersion in the digital realm is characterised by extensive screen time, averaging 4 to 5 hours daily, with a notable escalation on weekends. Online gaming consumes most of his screen time, which appears to be addictive in nature.

He speaks of both the benefits and adverse effects of this engagement. His mother's perspective diverges from his, significantly. She attributes his declining academic performance and emotional distress to excessive screen time. Her concerns extend to instances of encountering online toxicity, underscoring the potential risks associated with unsupervised digital engagement. The ad hoc monitoring mechanisms employed by his mother and brother have not yielded the desired results. Avinash's digital journey is not devoid of challenges. Despite his assertions of self-regulation, he admits to struggling with addiction, expressing a sense of dependency on his device.

Recommendations

1. ***Need for a balanced approach***
   Digital dependency of this nature could be handled by a balanced approach. The key elements are parental guidance, technological safeguards, and the cultivation of offline interests and connections to mitigate the adverse effects of prolonged screen time.
2. ***Develop systems for parental digital literacy***
   Parental guidance is complex in households such as these, as often the parents themselves are not digitally literate and equipped to play this role. The school can play a supportive role by bringing experts to enable parental digital literacy and devise suitable mechanisms to support and guide the child towards healthy digital engagement.
3. ***Use of effective support and guidance mechanisms early***
   Ideally, support and guidance from parents or caregivers could be initiated early for setting boundaries and enabling self-regulation. Clear guidelines could be established when the child is young, regarding screen time limits and permissible online activities. Avinash's digital engagement spans six years. These mechanisms ought to have been instituted much earlier to open effective pathways for self-regulation.
4. ***Mindful guidance of digital engagement from a young age***
   As the child grows up, the guidance approaches would ideally need to change to suit different age groups. It is also important to regularly review online interactions and intervene promptly in case of any concerning behaviour or

content.

5. ***Encourage open communication***
   Parental digital literacy will also open communication channels with the children. This could improve the familial relationships and make the children amenable to expressing their concerns and challenges openly, allowing for collaborative problem-solving. Suitable monitoring mechanisms can be created effectively in such an open context.
6. ***Promote alternative suitable offline activities***
   In a conducive home atmosphere, the children are more likely to be amenable to suggestions for suitable offline activities and hobbies which could create a sense of well-being.
7. ***Provide education on online safety***
   It is important for children like Avinash to receive comprehensive education on online safety, including strategies for navigating cyberbullying, privacy protection, and responsible online behaviour. This could empower them to recognise and respond to potential risks effectively.
8. ***Institute collaborations between parents, educators and mental health professionals***
   When children display helplessness and admit to 'addiction', action ought to be initiated. Some schools have in-house counsellors who can play a role here. If the school is not equipped, professional support could be sought from mental health professionals or counsellors to address underlying emotional challenges and support children's overall well-being. Therapeutic interventions could be explored to address any negative impacts of digital engagement. Collaborative efforts between parents, educators and mental health professionals could help in guiding such children's digital journey towards a harmonious equilibrium between virtual exploration and offline experiences.

Vignette 7: The Good, the Bad, and the Ugly of the Online World

Maithili is a 14-year-old student in Class 9, studying at an urban international school in Bengaluru. She lives with her mother, father, and 7-year-old sister. Her mother runs an academy for teaching robotics and public speaking, and her father works at a multinational company. Her parents work long hours, and they do not spend too much time together as a family.

Nature of Digital Engagement

Maithili possesses a phone and a laptop, which she uses extensively for schoolwork and leisure.

Entertainment sites/apps

Maithili uses Instagram as a source of entertainment, and a means to communicate - *"Instagram is important at our school because it helps with communicating with people, and most people have Instagram accounts."* Besides this, she uses applications like Messenger, Discord, Google Chat, WhatsApp, Telegram and Signal to stay connected with her friends. She uses OTT platforms like Netflix, Hulu, Amazon Prime Video and Disney + Hotstar for leisure. She also watches videos on YouTube.

Educational sites

Maithili turns to platforms like Canvas to keep track of her schoolwork. To aid with her academics, she uses Save My Exams and Physics and Maths Tutor to access past papers. She also uses Email to communicate with her teachers.

Time Spent Online

Maithili divides her time equally between education and entertainment. She spends about 4.5 hours a day on her phone, and another 2 hours on her laptop. She feels that she spends too much time online, but her attempts to decrease this have not been very successful - *"I tried to limit my usage during digital engagement during exams. But after my exams, my screen time spiked, so my self-control did not work too well."*

Offline Engagements

Maithili is interested in reading, writing, sewing, knitting, singing, and theatre, in which she is currently pursuing a Trinity certification. She feels that she does not spend enough time on offline activities and admitted why - *"I know that it is better to engage offline, but the dopamine rush I get from being online, I do not get through offline engagements."*

Impact of Online Engagement

Positive impact

According to Maithili, using educational websites that give her access to past papers has contributed to her receiving better grades. Through Instagram and YouTube, she has acquired a better world view. It has also given her access to unconventional success stories that she would not have otherwise known - *"Online, I see videos of people with a literature major being successful, as opposed to the age-old success story of someone who has studied engineering."*

She feels that conversing on Instagram makes communication more easy-going and informal, which she prefers over a formal conversation. She gave the example of being able to reach out to a senior of hers without any hesitation, in order to gain some perspective on college courses. Being online has also exposed Maithili to more information about topics like veganism, which she is passionate about - *"I've learnt more about veganism through the internet. Earlier, I would pay attention to my father's opinions on veganism, which had shaped my opinions of it. This turned me against veganism, but now, my views have changed. I am trying to become vegan myself."*

Her time on YouTube introduced her to a new hobby and creative interest - knitting and sewing. She watches many YouTube videos to upgrade her skills.

She also feels that being online has given her a voice to amplify social causes - *"Since we come from a privileged background, we have the power to make a difference in this world and being online enables that."*

Negative impact

Based on her personal experiences, Maithili feels that it is easy for people to be hurtful online. She recalled an unpleasant incident she had experienced - *"When I was in sixth grade, everyone started getting an Instagram account, so I got one, too. Some of my neighbours spread rumours about me online. This affected me, and I ended up leaving the school. I was not equipped to deal with it, neither were my parents. I even began to ask myself, 'why do I even exist?'"* During this time, she moved to reading as a form of escape.

More recently, she felt that her privacy was violated online - *"I put up a selfie online, and a screenshot of that was circulated to other people in school. I felt uncomfortable about this. I wanted to put up the photo, but I did not want other people circulating it."*

She indicated that her sense of self was being influenced by comparisons she made with others' online lives - *"When I see people my age having accomplished so many things, I feel really bad, especially because I have the same resources as them."*

Monitoring Maithili's Digital Engagement

Maithili's mother uses Qustodio, a third-party application, to control her screen time on her laptop and phone. With this application, all of the applications (other than Email, and education-related sites and applications) on her phone switch off after 9:00 pm. She has a 2-hour limit on her phone, and a 3-hour limit on her laptop.

Maithili shared that she was initially upset when her mother installed these applications to monitor her online engagement, as they were done without consulting her. *"I feel my mother is close to me, but I was upset when she set time controls without checking with me first. My aunt then facilitated a discussion between me and my mother, and things were sorted out."* Despite this, she feels that it is important to be monitored - *"If I wasn't monitored, I may not be able to control my usage about 25% of the time."* She also shared that she had got an Instagram account without her mother's knowledge, but later ended up telling her mother, with the help of her aunt.

Digital Engagement Atmosphere in the Home

According to Maithili, her father spends a fair share of his time online - *"My father's online engagement is insanely high, since he has to work a lot. He scrolls on his phone, even on his days off. He watches a lot of NDTV and YouTube Shorts."*

Her mother used to be online for several hours, but she has now cut down on her screen time, especially after Maithili's conversation with her mother.

Future Aspirations

In the future, Maithili aspires to study Computer Science or English Literature, Theatre and Communications.

Case Analysis and Recommendations

Maithili's case vignette reveals that her digital engagement is moderate and largely healthy, perhaps owing to the monitoring mechanisms her mother has put in place. She seems to be engaging online in a very mindful manner, and for specific purposes, like education or entertainment, and has fixed timings set for these activities. Although she does not give herself enough credit for it, she is able to adhere to the timings set by her mother. She shows the capability to maximise her digital engagement in a positive manner, by learning more about topics of her interest, building on her hobbies, and doing what she can to address social issues. Maithili mentioned using several applications to communicate with

people online, but she made no mention of spending time with people offline, even when listing her offline activities.

Recommendations

1. ***Spending time with people offline***
   It is possible that offline interactions and engaging with friends offline will give her a sense of satisfaction. Her parents can make efforts to ensure that this happens.
2. ***Exploring new offline engagements***
   Maithili feels a sense of happiness when she is online, which she feels that she does not experience offline. Since she feels that she does not spend enough time offline, she could explore new activities to engage in offline, and could possibly find a few that leave her with a sense of happiness. She will need to be guided towards these by either her peers or her parents.

Maithili was in Class 6 (below the age of 13) when she first created an Instagram account, without her parents' knowledge. This is technically not allowed. Maithili could have possibly felt the need to hide the fact that she had an Instagram account from her mother because she felt her parents would most probably not give her the permission to do so. She succumbed to peer pressure when she took this step. This became the source of cyberbullying, which neither she nor her parents were equipped to deal with. This is a cause for concern, since this is a time when she may have needed their support. She also seems to be questioning her capabilities and accomplishments, based on what she sees online, and this can have the potential to diminish her self-confidence. She also shared that her mother had set up monitoring controls without consulting her, which briefly strained their relationship.

Recommendations

1. ***Open communication channels between parents and children***
   This could have delayed or averted the incidence of cyberbullying, as she may have opened an Instagram account later, with the knowledge of her parents. As her mother is well entrenched in the field of robotics, it is likely she would have information on what a digital footprint is, and also the lack of control that emerges once anything is put into online platforms. Open discussions with her parents could have also prevented the resentment that arose when her mother instituted monitoring controls without consulting her. A discussion between her and her mother could have enabled joint decision-making, giving Maithili both agency and ownership, thereby making her more amenable to the guidelines. Such conversations fostering values like openness can provide a safe space for children

to communicate their feelings

2. ***Digital literacy workshops for parents and children***
   These workshops need to be structured to include discussions on cyberbullying. These should have guidelines on how to deal with this phenomenon. Such inputs should not include just technical knowledge, but also bring in emotions, and the long-lasting impacts that adverse online experiences can have on individuals.
3. ***Seeking mental health support***
   The incidence of cyberbullying made Maithili question her own existence, which are painful thoughts and emotions for a child to go through, especially when they deal with them alone. Maithili could consider seeking help from a mental health professional to address any residual negative feelings. It is extremely important for her parents to be on board with this as well.

ANNEXURES

Annexure 1: An Overview on Participatory Action Research

Participatory research is more of a methodology for intervention, development and change within communities and groups, rather than a technique. It holds within it a range of techniques. "Essentially, Participatory Action Research (PAR) is research, which involves all relevant parties in actively examining together current action (which they experience as problematic) in order to change and improve it. It aims to be active co-research, by and for those to be helped" (Wadsworth, 1998).

PAR Techniques

PAR techniques are distinct from all other techniques by virtue of the fact that the 'stick' is handed over to the participants. This implies that there is no tight questionnaire or interview guide that is administered. Instead, the researchers refer to a set of exploration and observation points. These enable them to sensitively nuance people's positions, concerns, beliefs, and motivational factors, based on how they interact while the techniques are being used. Since there is no pre-set questionnaire to limit the researchers, very often, these techniques yield insights or information which could be beyond their world view. This could be unspoken and yet central to the world view of the community or the group one is working with. Usually, two to three techniques are used in conjunction for both the researchers and participants to move on to new awareness levels which enable action. Social mapping, resource mapping, chapati/Venn diagrams for understanding power dynamics, free listing (problems), pile-sorting, health ranking, matrix scoring, wealth ranking, are some of the commonly used techniques (Weedon, 1987).

PAR Techniques Employed in the Current Study

In this study, three PAR techniques were used in conjunction.

1. Free listing
2. Time tracking/allocation
3. Interest ranking

Modus Operandi of PAR Techniques

The PAR sessions were conducted by two to three researchers. One moderated the session, and the other took notes, and helped the moderator frame probes, as the session proceeded. The third researcher, if present, played the role of an observer and note taker. Due to time constraints, the PAR techniques could not be carried out as initially intended. The changes incorporated by the researchers have been mentioned, along with a brief on the actual technique.

Free listing

The note taker holds up a chart paper or pins it to a white board where it is visible to all. The moderator asks the group to mention all the digital platforms/sites/apps they engage with. As group members mention these, the moderator puts these down on the chart paper (free list). This allows the group to 'see' the data as it is being collected. This makes for a comprehensive listing.

As the listing proceeds, the note taker keeps track of which digital platforms are mentioned first and early in the listing process. This indicates the importance of the platform.

Once the free listing is complete, the moderator writes the name of each platform/site/app on a separate index card.

Changes made by the moderator during data collection: Most often, the classroom board was used for the free listing process, as opposed to a chart paper. The moderator would list each platform/site used by the group as it was mentioned by them. The moderators did not list down each of the responses provided by the group onto separate index cards, which was intended to be done to facilitate the next part of the PAR process. The other steps were followed as mentioned above.

Time tracking/allocation

The moderator initiates the time tracking/allocation session by first asking the group how much time they cumulatively spend on different online platforms in a day/week. The note taker writes this time range on the chart paper.

The moderator then shows the group one card at a time and asks them approximately how many hours a day/week they spend on each of these platforms separately. As the individuals in the group give their responses, the note taker keeps track of the individual responses for each platform. Once the range is secured, this is written on each index card.

This makes the adolescents active participants in the data collection process, rather than sources of data. This also gives them an opportunity to reflect on whether they feel that this time is well spent or not. There is a difference between 'knowledge' and 'awareness' which comes to the fore through this process. For example, adolescents may know that they spend 4 to 6 hours a day on different digital platforms, but to see this visually made them reflect on this. This element of awareness could guide them without compulsion and coercion towards a direction where they may seek to alter this.

The note taker records not only the factual information that emerged, but also the organic discussions that the adolescents engage in during this process. This provides a nuanced understanding.

Changes made by the moderator during data collection: Index cards were not used when collecting responses on the amount the children spent on different platforms per day/week. The moderator would simply ask the students, based on their responses listed on the board, how much time they spent on each. Once these were secured, the time range was written alongside the platform. The other steps were followed as mentioned above.

Interest ranking

Once the time allocation for all the digital platforms/sites/apps is complete, the moderator hands these cards over to the adolescents. They are asked to physically rank the cards by placing them in order. The card placed down first was the platform they find to be the most meaningful, and the last card is the platform they find least meaningful.

While the process is underway, there are discussions on what should be placed where. The note taker and moderator keep track of why some platforms are more meaningful than others. This organic discussion throws light on how these platforms brought meaning to students' lives. Further, reasons were proffered for some platforms getting a low rank.

Changes made by the moderator during data collection: When asking the students to rank all the platforms mentioned by interest, once again, index cards were not used. As everything was listed out on the board, the moderator would ask the question, and write down the responses on the board, alongside the platform that the students were most or least interested in.

On most occasions, this information emerged organically, hence the note taker recorded just the details of the discussion. Sometimes, when the ranking proceeded without much organic discussion, the moderator probed as to why different platforms were ranked differently. In some cohorts, the groups chose to change the ranking during the session. With some groups, they brought new platforms into the picture as the ranking proceeded. This made the data collection sessions free flowing, authentic and comprehensive.

At times, students would also share the platforms that they most used, or most preferred, as opposed to what they were most interested in. While there were overlaps between these and what the students were most interested in, the responses also seemed to vary at times. These differences were recorded as well.

The FGDs were conducted simultaneously or after the PAR processes ended. In many sessions, a number of the questions in the FGD were covered without directly asking these. The PAR process also played a role in rapport building and made the students reflective.

Annexure 2: Data Collection Tools

Participant Information (PI) Sheet

Enfold Proactive Health Trust is an organisation based in Bengaluru, which works in the domains of Gender Equity, Life Skills and Personal Safety, and uses a rights-based, restorative and gender transformative approach. Enfold is undertaking a study on the impact of digital engagement and social media on adolescents, in collaboration with the Fund for Global Human Rights (FGHR). The study will be conducted in eight schools/centres in Bengaluru city and in rural Karnataka.

You are being invited to take part in this research study. Before you make your decision, it is important for you to understand why the study is carried out and what it will entail. Please take your time and review the below information carefully.

Here is a list of Frequently Asked Questions (FAQs) that may help you arrive at an informed decision. Additionally, you may want to speak to others about participating in this study.

<u>What is the purpose of the study?</u>
This study seeks to secure an in-depth and nuanced understanding of the nature of adolescents' digital engagement to promote healthy and responsible online digital engagement.

<u>What is the duration of the study?</u>
The study will be conducted from 15th July 2023 to 15th July 2024.
The data collection will be undertaken from 15th August 2023 to 15th January 2024

<u>Why have you been chosen to participate in this study?</u>
The key stakeholders for this study are:

1. Adolescents (from ages 10 to 16 years)
2. Teachers associated with the adolescents identified for the study
3. Parents of the concerned adolescents

You feature in one of the above categories

<u>What will be expected of you as a study participant?</u>

1. As an adolescent, you will be requested to participate in a Focus Group Discussion (FGD) with your classmates and you may also be requested to provide data through an In-Depth Interview (IDI). The duration of the FGD could be 1 to 2 hours, and the duration of the IDI could be 40 minutes to 1 hour. These sessions will be conducted in-person.

2. As a teacher, you will be requested to do the following:
    a. Identify adolescents (students) from your class who could participate in the FGD.
    b. Identify adolescents from your class who could be respondents for IDIs.
    c. Support the research team in identifying and contacting parents of adolescents who will be participating in the study: i) to secure consent for their children's participation in the study; and ii) for enrolling parents into the study.
    d. Provide information to the research team by participating as a key informant in this study. This Key Informant Interview (KII) will be conducted in-person.
3. As a parent/guardian, you will be requested to do the following:
    a. Provide assent for your child/ward to participate in the study.
    b. Provide information to the research team as a respondent in the survey, which will be conducted online, via a phone interview or in-person, as per your convenience.

<u>Will any special measures be instituted for data collection with children with intellectual disabilities?</u>

Yes, the following protocols will be adopted.

- Permission will be sought from the concerned institution.
- Consent will be obtained from the parent/guardian.
- Care will be taken to ensure that the data is collected from the study participant in a safe and comfortable place.
- Additionally, efforts will be made to collect the data in the presence of peers.
- The questions will be kept simple and easily comprehensible.

<u>How will your data be used? Will your data stay private? Will your identity be disclosed?</u>

- Your data will be stored in a secured location.
- Your data will be kept confidential, and the anonymity of the participants is assured.
- Your data will be processed with adherence to existing best practices in research.
- Your data will not be shared with anyone or circulated without prior consent from you.

<u>What are the risks involved in participating in this study?</u>

Given the topic of this study, there are no foreseeable risks. However, as this is an exploratory study, there is the possibility that during data collection, some uncomfortable memories or feelings may arise. A teacher in your child's/ward's school/centre has been designated to provide you with information on the Enfold Proactive Health Trust's support helpline if required. Please feel free to use this facility.

Can you exit in the middle of the research study?
Your participation in this study is strictly voluntary. You may choose to not answer questions from any of the proposed tools of data collection. You may withdraw your participation at any time during data collection. Even after data collection is complete, you can inform us if you wish to retract your data for a period of up to two weeks.

Will you be compensated for this study?
You will not be compensated for your participation in this study.

Is there any other information you need to be privy to?
There is a very low possibility of the following occurring, but as the study is being conducted with and is about children, it is mandatory for us to inform you of this clause. Please note that we may share whatever information is in our possession or control if we believe that disclosure is reasonably necessary to comply with the law, including (1) the mandatory reporting of obligations regarding information or knowledge about a case, or likelihood of a case of child sexual harassment/assault/pornography under the Protection of Children from Sexual Offences Act, 2012 (even if it is without the child's consent); and (2) to respond to an emergency which we believe in good faith requires us to disclose information which is in our possession.

Who can you contact in case of any research related queries?
Please feel free to reach out to the researchers of the study via their email for any questions that may come up. Do not hesitate to clear up any of your questions before proceeding with the participation in this study. We will provide the school/centre coordinators with the relevant information about the study in case you need to approach them to clarify any doubts.

Thank you for reading this information and we hope to contact you soon!
Warm Regards
Vinalini and Juhi

Assent Form for Parents

Enfold Proactive Health Trust is an organisation based in Bengaluru, which works in the domains of Gender Equity, Life Skills and Personal Safety, and uses a rights-based, restorative and gender transformative approach. Enfold is undertaking a study on the impact of digital engagement and social media on adolescents, in collaboration with the Fund for Global Human Rights (FGHR). The study will be conducted in eight schools/centres in Bengaluru city and in rural Karnataka.

Your child/ward has been invited to take part in this research study.

Before you make your decision, it is important for you to understand why the study is carried out and what it will entail. All details are available in the Participant Information (PI) Sheet provided to you.

Note: Please take your time and review the below information carefully.

1. Your assent is required for your child's/ward's participation.
2. Take your time to review the statements given below and the PI Sheet before you decide to enrol your child/ward in this study.
3. If you wish to hold a copy of this assent form, you may request one and we shall provide it.
4. Please check the boxes provided in the following pages to confirm your child's/ward's participation in the study.

Name of the principal investigator: Dr Vinalini Mathrani
Name of the junior researcher: Juhi Mathew
Duration of the project: July 2023 to August 2024

Title of the Study: **Pathways for Healthy Digital Engagement: Perspectives of Children and Adult Stakeholders from Karnataka, India**

Note: Please tick the boxes below to confirm your child's/ward's participation in this project.

1. I have read and understood all the information provided in the Participant Information Sheet in a language comprehensible to me.
   - ☐ Yes
   - ☐ No

2. I give assent for my child/ward, to be a participant in a Focus Group Discussion and/or an In-Depth Interview.
    - ☐ Yes
    - ☐ No

3. I consent to the processing and analysis of the data that will be obtained from my child/ward for the purposes of this study.
    - ☐ Yes
    - ☐ No

4. I understand that such information will be treated as strictly confidential and handled in accordance with the existing laws and policies regarding privacy.
    - ☐ Yes
    - ☐ No

5. I understand that the participation of my child/ward is voluntary; that s/he/they can choose not to participate in the data collection processes at any given time, without being penalised or disadvantaged in any way.
    - ☐ Yes
    - ☐ No

6. I understand that my child's/ward's participation in this study carries no, or negligible risk. However, I am aware that this participation may evoke uncomfortable feelings. If my child/ward displays any discomfort, s/he/they will choose not to answer a question or withdraw from the data collection session.
    - ☐ Yes
    - ☐ No

7. I give my assent for my child's/ward's participation in this study.
    - ☐ Yes
    - ☐ No

8. If you are content with the aforementioned terms and conditions and would like to indicate your assent on behalf of your child/ward for participating in this study through this form, please fill out your full name, your child's/ward's name, the school and class they belong to, email address, phone number, city and today's date in the space provided below.
    a. Full name of parent/guardian:

b. Gender of the parent/guardian:
c. Name of your child/ward:
d. Gender of your child:
e. Name of your child's/ward's school:
f. Class your child/ward belongs to:
    - ☐ Class 5
    - ☐ Class 6
    - ☐ Class 7
    - ☐ Class 8
    - ☐ Class 9
    - ☐ Class 10
g. Parent's/guardian's email address:
h. Parent's/guardian's phone number:
i. City:
j. Date:
k. Parent's/guardian's signature:

Please feel free to reach out to the researchers of the study via their email for any questions that may come up.

Do not hesitate to address any questions before proceeding giving assent for the participation of your child in this study. We will also be briefing your school/centre coordinators to address your queries before the start of the study to address any queries.

We look forward to your participation.

Thank you
Vinalini and Juhi

Consent Form for Parents

NOTE: Please read this document carefully.

1. Your consent is required for participation.
2. Take your time to review the statements given below.
3. If you wish to hold a copy of this consent form, you may request one and we shall provide it.
4. Please tick the boxes below to confirm your participation in the study.

Name of principal investigator: Vinalini Mathrani
Name of the junior researcher: Juhi Mathew
Period of study: July 2023 to August 2024

- ☐ I have read and understood all the information provided in the Participant Information Sheet, in a language comprehensible to me.
- ☐ I consent to the processing and analysis of the data that will be obtained from me for this study.
- ☐ I understand that such information will be treated as strictly confidential and handled in accordance with the existing laws and policies regarding privacy.
- ☐ I understand that my participation is voluntary; that I can choose not to participate in data collection at any given time, without being penalised or disadvantaged in any way.
- ☐ I understand that my participation in this study carries no or negligible risk. However, I am aware that this participation may evoke uncomfortable feelings. I am aware that I have the option to not answer any of the questions and/or withdraw from the data collection session.
- ☐ I am willing to participate in a survey for this study.

Name	Place	Date	Signature

Consent Form for Teachers

NOTE: Please read this document carefully.

1. Your consent is required for participation.
2. Take your time to review the statements given below.
3. If you wish to hold a copy of this consent form, you may request one and we shall provide it.
4. Please tick the boxes below to confirm your participation in the study.

Name of principal investigator: Vinalini Mathrani
Name of the junior researcher: Juhi Mathew
Period of study: July 2023 to August 2024

- ☐ I have read and understood all the information provided in the Participant Information Sheet, in a language comprehensible to me.
- ☐ I consent to the processing and analysis of the data that will be obtained from me for this study.
- ☐ I understand that such information will be treated as strictly confidential and handled in accordance with the existing laws and policies regarding privacy.
- ☐ I understand that my participation is voluntary; that I can choose not to participate in data collection at any given time, without being penalised or disadvantaged in any way.
- ☐ I understand that my participation in this study carries no or negligible risk. However, I am aware that this participation may evoke uncomfortable feelings. I am aware that I have the option to not answer any of the questions and/or withdraw from the data collection session.
- ☐ I am willing to participate in a Key Informant Interview for this study.

Name	Place	Date	Signature

Participatory Action Research (PAR) and Focus Group Discussion (FGD) Guide

Materials needed

1. Mats for sitting on the ground
2. Chart paper
3. Notebooks/registers
4. Sketch pens
5. Pencils, erasers, pens
6. White index cards
7. Blu Tack/Sellotape to stick the chart paper on the board or wall
8. Chalk, in case you need to use the blackboard

Note to the moderators and note takers

(All sentences in italics are instructions for moderators and note takers.)

*(**Moderators**, please try and elicit the participation of the whole group during the session, especially keeping in mind the engagement of all genders. Do not force children to talk; make sure that they are listening and engaging. If you feel from their body language and facial expression that they are not in agreement, get them to articulate. If even then they are not willing, let them be and see if you can approach them later.)*

*(**Note takers**, please take detailed notes of not just the conclusions, but all the discussions and dynamics that lead to the conclusions. Please keep track of all gender-related differences, if these arise. Also, keep track of differences in opinions between the majority and minority responses. Write down differing numbers with different responses. Do help the moderators frame probe questions. If you feel that the group is being dominated by a few, support the moderator in bringing more children into the discussion.)*

Record the following:

1. School name
2. School type - urban/rural; international/private/government; children with or without diverse needs
3. Class in which the PAR and FGD is being conducted
4. Number of students in the group
5. Number of children from the different genders
6. Age range of the students in the group *(make sure the groups only have children in the age range of 10 to 16)*

First, ensure that you have 8 to 15 students in the group. This is the optimum number. Before you initiate the session, ensure you have obtained assent from all the parents of the children in the group. Get the students to introduce themselves and check this.

Introduce yourselves to the students:
Moderator: Good morning/afternoon, I am _____ and this is _____. We are from Enfold Proactive Health Trust. Our organisation has been working in your school. Today, we are here to talk to you about your online engagement. We understand that you do different things online, so we are conducting a research study to really understand from your point of view what this means in your lives.

Then begin the student consent process: We have approached your parents to get permission to talk to you and they have agreed, but before that, we would also like to ask you if you are willing to talk to us today. We assure that whatever you tell us will not be shared with anyone - teachers or parents. Further in the reports your names will not be mentioned anywhere.

Give students a chance to opt out if they want. Ensure that you start with at least 12 students to allow for drop out at this stage. We need 8 to 15 students for a productive session.

If possible, you can push the furniture aside and sit with the group of students on the floor in a circle. Carry some mats with you to spread on the ground. If not on the floor, sit on chairs in a circle. This will build camaraderie and eliminate hierarchy between moderators and students. Gauge the situation as you may need to adopt different approaches in different schools. The important thing is to ensure that students are relaxed and comfortable. ***Please try to make your language child-friendly and inviting through the engagement.***

I. Area of exploration: Types of digital interaction

Moderator: OK, now let us begin.

Start with the ***PAR process of free listing*** *of the different online platforms, YouTube videos, games they play. Try to ensure that all students participate, and if some do not engage at all, please keep track of this. It may be possible that these students have no digital engagement at all. Do ask them about this during the discussion. If they say that they have no online engagement at all, please write down the names of such students.*

Moderator:

1. We would first like you to share with us what are the different things you do online.

2. Do you play games? Please share the names of the games you play.
3. Do you visit different sites? Can you tell us what these sites are?
4. Do you watch videos on YouTube, etc.? What are these videos about?
5. Do you spend time on social media? Which social media platforms are you on?
6. Do you browse the net for entertainment? Which sites?
7. Do you browse the net for educational purposes and information? Which sites?
8. Do you shop online independently? Which shopping sites do you use?

As the students start listing these out, the note taker needs to write all these down in their register. Please keep track of students' body language and facial expressions as they do the listing exercise and record this in your field notes. Which items do they seem happier by? Record gendered variations in types of digital engagement.

*Once the listing is complete, the **note taker** needs to put all these items mentioned on the chart paper by organising these into three to five heads depending on the responses. First, list all the social media sites; then list all the games (they could play these on different apps); then list all the different types of videos they watch on YouTube or other channels; then record any other sites they may have visited for educational or other purposes - browsing the net; shopping sites. In the younger age groups, there may not be any social media engagement or shopping sites.*

The chart paper should be clearly visible to all students.

*The **moderator** should then draw the attention of the students to the chart:* Now tell me, is this a complete listing of everything you do online? Please add to this if you feel we have left out anything.

*The **note taker** should add any additional items that the students may bring up at this point, to her notes and to the chart.*

*Now move on to the second **PAR activity of time tracking/allocation**.*

II. Area of exploration: Quantum of time spent on different forms of digital engagement

Moderator: Thank you for giving us a sense of what you do online. Please share with us in total, how much time you spend per day online on doing these different things.

It is likely that there will be a wide range, so the note taker should keep track of all the different timings mentioned to get a picture of the maximum, minimum and average time the students spend online. The note taker should then write down only the range on the top of the chart. For e.g., it could be 2 to 4 hours per day. If some students would like to talk about the total amount of time they spend per week rather than per day, please allow them to do this.

Moderator: So now we have an overall idea of the total time. Can we now go item-wise and you tell us approximately how much time you spend on the different items per day/ per week.

*As the children talk, the note taker should keep track of these responses and write down the range for each of the items. Not all children will be engaged with all the items in the list. The **note taker** should keep track of which are the more popular items. Identify gender differences if any.*

*Once the time tracking is over, the **note taker** should write each item with its time range on separate white index cards. We can now move on to the third **PAR activity of interest ranking**.*

III. Area of exploration: Nature of content; purpose of digital engagement; interest levels

*The research team can take a call as to who should handle the cards in the ranking process: the moderator, or the students. The **moderator** can follow the instructions of the students in placing the cards.*

*The **note taker** needs to take detailed notes on what the students say about the different online items they talk about. Please keep detailed notes on which items they found easy to rank, and why; and which items they found hard to rank, and why. Allow them to shift the cards around until they are satisfied with the ranking.*

These four areas of exploration mentioned below can be presented to the students once they start engaging in the ranking process, so that you get responses to these areas of exploration organically.

Moderator:

1. We now want you to rank these items, where right at the top, you put the item you enjoy the most, and at the bottom you put the item you find the least interesting.
2. As you do this, can you tell us a little about what the game/video/social media platform is about.
3. Also, tell us why you engage with these different activities.
4. While you are arranging the cards in order, we would like to know why you like a particular game/video/ social media platform more than others.

Further, if you feel two or three items are similar, you can place the cards next to each other, rather than one below the other. This is also because all of you will not be doing the same things online.

This brings the PAR activities to a close and the FGD can begin, but please keep the chart up and the ranked index cards visible as you will need to refer to these during the FGD.

FGD Questions

Please ask the following questions selectively. If you have already got a sense of some of the responses to the questions through the PAR activities, do not ask them again or ask them contextually to get additional information. Also, please study the entire set of questions carefully, and if you feel you can ask some of these while the PAR activities are going on, please do so. All the following can be used as probes if you are following the organic process.

IV. Area of exploration: Utility of digital engagement and social media; and types of communities built online - positive impact

Moderator: So, we are getting a sense that most of you seem to enjoy your time online - _____. *The **moderator** will need to refer to some of the specific items and the specific reasons the students talked about during the ranking process to contextualise this statement.*

1. Can you tell us about all the benefits digital engagement and social media has brought to your lives? (Questions 2 to 6 questions could serve as probes; listen to what the children say before asking questions 2 to 6)
2. Is it an easily accessible form of entertainment?
3. Has it built skills that you will be able to use currently and in the future?
4. Has it improved your academic performance? How has this improved it?
5. Has it created opportunities to explore further studies and career options?

6. Does it give you the opportunity to develop your interests? In what way?
7. Has it served as an outlet for your creativity? How?
8. What types of groups and friends have you made online who may or may not be a part of your friends' circle in the real world?
9. How has online engagement with these people (the communities you have built) benefitted you? Or if it has not benefited you, why is this so?

Recommendation

10. Can you suggest ways in which you focus your digital engagement more to sites and activities that make you feel productive and satisfied?

V. Area of exploration: Impact of digital engagement on sense of self and well-being

Please use your judgement while asking the following questions. See which ones are relevant to the different groups. There are several feeling questions, so you can ask the children to draw smiling or sad faces or write what they feel on the index cards.

Moderator:

1. Given this amount of time that you spend *(mention the range of total time spent online as given by the students)*, what do you feel?
2. What parts of digital engagement make you feel happy and what parts make you feel bad about yourself?
3. Do you feel good about yourself while playing these games/visiting different sites/watching videos/engaging on social media? *(Now that you have a sense of the different things the students do online, refer to the free listing chart and organise the discussion so that the students respond to this question by talking about the different items they have listed.)*
4. While playing games, do you compete with just yourself and focus on bettering your scores?
5. Do you compete with your friends? How do you feel when your friends do better than you? Do you feel pressured to keep playing the game till you get the scores you want?
6. Do you become more popular if you get high scores in these games?
7. When you watch videos on YouTube and other channels, is it primarily for entertainment or for educational purposes? What do you feel when you watch these videos? Do you feel relaxed? Do you feel agitated? Do you feel the need to keep watching these videos because the sites keep showing you that more similar videos are available?

Ask the following questions only if the group of students is on social media.

8. With specific regard to social media platforms, do you feel pressured by the way in which your peers project themselves, and do you feel you also need to do the same? *(Probe regarding whether this projection could pertain to their physical appearance {weight, skin colour, acne marks}; the clothes they wear; what they do with their time - go on holidays; go to parties, etc.)*
9. How does this pressure make you feel?
10. Do you feel that your sense of self is affected by how you are perceived on social media? If yes, to what extent?
11. How do you feel when you see you have numerous followers or get many likes when you post something? How do you feel when this does not happen?
12. Do you feel anxious or stressed while using social media? If yes, to what degree or extent do you feel stressed or anxious?
13. Has anyone bullied you online? If yes, in what way?
14. Do you feel trapped by social media? Would you like to opt out of it? Yes/No.
15. What are your concerns about opting out?
16. Do you have any influencers who you follow? Why do you follow them? How do they affect your behaviour and lifestyle?

VI. Area of exploration: Exposure to inputs on safe digital engagement

Moderator:

1. Have you been exposed to any inputs, such as safe online digital engagement from your teachers or from anybody who has visited your school?
2. If yes, can you tell us who gave you these inputs?
3. What were these inputs?
4. What is your opinion of these inputs?
5. Have you used these till date? How?
6. Do you think you can use these in the future?

Recommendation

7. Is there anything your teachers need to know to improve your online engagement?
8. What do you think the role of the school should be in this regard?
9. Would you be interested in the development of educational resources: infographics, videos, etc. related to responsible online engagement? Yes/No? Why or why not?
10. Would you be interested in running collaborative campaigns by using this material to prevent cyberbullying and promote online safety? Yes/No? Why or why not?

11. Would you like to be trained as online safety ambassadors which will enable you to act as peer mentors to promote positive online practices? Yes/No? Why or why not? *(Use your judgement about asking this question.)*

VII. Area of exploration: Offline activities and hobbies

Moderator:

1. When you are not in school or studying at home or engaged on any digital device, what do you do?
2. What offline hobbies do you pursue?
3. Do you enjoy these?
4. How much time do you spend per day/per week on these offline hobbies?
5. Do you feel you spend adequate time on these offline activities? How does the time you spend offline compare with the time you spend online?
6. Which do you find more enjoyable?
7. Which do you find more satisfying?

VIII. Area of exploration: Type of device and monitoring of online engagement

Moderator:

1. Can you tell us if you have your own device? Yes/No?
2. If yes, what device/s is/are it/these?
3. At what age did you get your own device? *(Please record the age range.)*
4. If you do not have your own device, whose device do you use? What are these devices?
5. Who monitors your online time? Do your parents set up the amount of time you can spend daily/weekly, and you adhere to it?
6. Do you self-regulate, or do your parents have to keep telling you to get off the device? Or is there some automatic system for monitoring which sites you visit and how much time you spend?

Recommendation

a. Is there some way that you can regulate your digital engagement yourself?
b. Do you feel your parents have the required knowledge and capability to monitor your online engagement?
c. Is there something you would like your parents to know or understand when they monitor your time on devices?

7. What do you feel when your parents stop you from spending too much time online?
8. Do you think your parents need to be role models in their own digital engagement?
9. Can you tell us about some of the things you do to spend extra time online without your parents knowing?
10. Do you feel they understand you? Do they know and understand what you are doing online?
11. Do you feel the need to communicate this to them?
12. Are you on sites or games you feel they disapprove of? If yes, why do you think they disapprove of these? Is it justifiable?

IX. Area of exploration: Negative impact

Moderator:

1. Do you think your online engagement has affected your sleep? How many hours do you sleep?
2. Do you sometimes wake up in the middle of the night and access your device or want to access your device?
3. Has this affected your academic performance? If yes, what is the effect? What are the reasons for this?
4. Has it affected your relationship with your parents, siblings and friends? If yes, how?
5. Has it affected your ability to make new friends in the offline world?
6. Do you prefer being with your device than with people?
7. Do you just want to be left alone with your device without interruption for extended periods?
8. Are there times when you prefer the virtual world to the real offline world? If yes, why? How often does this happen?
9. When you are in the company of others, do you sometimes find that you are going online, and you have disconnected from the conversation or activities around you? If yes, how often does this happen?
10. Do you feel that the school system/your parents/indirectly your peers, are putting pressure on you to be successful?
11. If yes, in some cases where you cannot succeed in the real world do you feel compelled to at least be successful in the virtual world?

Recommendation

12. What in your opinion is a child/adolescent-friendly support system for online issues?

13. Do you think there should be online platforms that incorporate your feedback on online safety policies, features of social media platforms, or any other related topics? Yes/No? Why or why not?
14. Do you need any inputs on the benefits and risks of online engagement?

(Try to gauge if there is some level of addiction or unhealthy engagement and identify the children displaying this. They need to be identified for conducting in-depth interviews.)

Teacher Interview Guide

Materials needed

1. Participant Information Sheet
2. Teacher consent form
3. Pens, pencils, erasers
4. Notebooks/registers
5. Interview guide

Note to the interviewers and note takers
(all sentences in italics are instructions for moderators and note takers)

Consent Process

Introduce yourselves to the teacher:
Interviewer: Good morning/afternoon, I am _____ and this is _____. We are from Enfold Proactive Health Trust. We know that you are aware about the study we are conducting on the 'Pathways for Healthy Digital Engagement: Perspectives of Children and Adult Stakeholders from Karnataka, India'. You may have some questions about the study, so before we begin the interview, we would like to share the Participant Information (PI) sheet with you. Do read it and tell us if you need any further clarifications.

Wait for the teacher to finish reading the PI sheet. Provide them with any clarifications, if needed. Once this is over, hand them the consent form. Let them tick all the relevant boxes and sign the form. Then begin the in-depth interview process.

I. Area of exploration: Teacher's background

1. Name of the teacher:
2. Name of the school:
3. Type of school
4. City/District/Taluka:
5. Location - Urban/Rural
6. Age:
7. Gender:
8. Class teacher or subject teacher:
9. Subjects taught:
10. Number of years of teaching experience:
11. Age range of students taught:

12. Grade/s (being taught by the teacher)
13. The class the student PAR and FGD was conducted with:

II. Area of exploration: Overview regarding students' digital engagement and social media engagement; patterns of digital engagement, purpose, and time spent

We understand that you have been teaching children in the age range of X-X *(refer to the age range the teacher has taught)* for X number *(mention the number of years they have been teaching)*, so we would like to hear a little about you regarding your view about digital engagement of the children you are teaching.

1. Typically, at what age do your students begin their online engagement? What is the nature of their engagement in the early years? *(Probe as to what type of content they engage with in their early years only. We will get details on what they are currently doing, subsequently in the interview.)*
2. Now regarding the students, you are currently teaching (mention the class with whom you conducted the PAR and FGD), can you tell us a little bit about the current nature of their digital engagement.
    a. Do the children in your class have their own digital devices? Yes/No?
    b. If yes, approximately how many would have their own devices?
    c. At what age do parents typically give children their own devices?
    d. At what age do children typically begin their digital engagement?
    e. Are there any students in your class who have no digital engagement at all? *(Try to get the names of these students, and we will approach them for in-depth interviews.)*
    f. Are you aware of what these students do online in terms of what are the different types of digital engagement. Are there any gender-based differences? Please elaborate. *(Try to get specific information on the types of digital engagement the students are currently engaging in - games, videos, social media, independent online shopping, net browsing for educational purposes, net browsing for entertainment, etc. It is likely that the teacher will just mention specific games or sites, you record it in the way the teacher tells you, but later divide it into these six headings. Also, do not proffer or share any information that you got from the student PAR and FGD. We are trying to get different perspectives.)*
3. Can you tell us what are the reasons for these different forms of digital engagement? *(Please refer to the responses the teachers give you in terms of what they think the students are doing online and ask them specific questions as to why the students*

engage with these sites, videos, games, etc. The teacher may proffer these reasons while responding to question f, so do not repeat this if it has been shared already.)

4. How much time do you think the students spend online on these different digital activities? Are there any gender-based differences? Please elaborate. *(Use your judgement to develop probes, get an overview of the average time students spend totally online per day/per week. Probe what the possible differences could be during term-time and during the holidays. Also ask what the teacher thinks about the average time.)*

III. Area of exploration: Positive impacts of digital engagement

1. Given this kind of digital engagement, do you think there are any positive outcomes? Yes/No? *(Explore the differential gendered impact if any.)*
2. If yes, can you please elaborate what these are? *(Probe: at this point of time, explore concretely what the positive outcomes and impacts are; not what they think could potentially be positive outcomes. Explore whether some types of engagement have positive impacts while others do not. Which ones currently have a positive impact? Elaborate.)*
3. Are you aware of any students in your class who do have a significant digital engagement where the impact on the student has been largely positive? How many such students are there? *(Can you get the name of these students, and we could approach one for an in-depth interview.)*
4. If there are no positive outcomes currently, do you think there can potentially be some positive outcomes from this kind of digital engagement? *(Ask this question only if the teacher has no responses to questions 1 and 2 i.e., there are no positive outcomes. Probe as to which types of digital engagement have the potential to be positive for the current batch of students we are talking about.)*

IV. Area of exploration: Negative impacts of digital engagement (including impact on self-esteem and well-being)

1. Given this type of digital engagement, can you tell us about all the negative impacts you have seen? *(Explore the differential gendered impact if any.)*
2. Does this impact students' self- esteem/body image and well-being positively or negatively from your personal experience? *(At this point, get the teacher to talk concretely about her statements by giving specific examples to validate these claims. Also, let them refer to different types of digital engagement as all may not have the same impact. If the teacher thinks that digital engagement has negatively impacted self-esteem and well-being, encourage them to talk about this.)*

3. Have you come across any cases of digital addiction in the class you are teaching? Yes/No?
4. If yes, can you tell us why you think the child/children could be addicted? *(Find out the names of these children and get the teacher's permission to conduct in-depth interviews with them.)*
5. Even if you have not personally seen any negative impacts of digital engagement, potentially, what do you think some of the negative impacts could be?

V. Area of exploration: Nature of change the students are encountering because of digital engagement including social media; teachers' opinion on digital engagement

1. Now that you have XX number of years of work experience (please refer to the number of years of work experience the teacher mentions at the beginning), what kind of changes are you seeing in students due to online engagement? *(Probe: changes in social behaviour; academic performance; sense of self and well-being; interest in and engagement with sports and other extracurriculars - art, drama, etc.)*
2. What are your concerns for this current batch of students? *(Keep the discussion focused on the group of students they are teaching with whom the PAR and FGD was conducted.)*
3. What do you feel about digital engagement on the whole?

VI. Area of exploration: Use of digital technology for educational purposes

(The section above focuses on the overall impact of digital engagement while this section relates directly to the use of digital technology for education. Please ensure you make this distinction. While responding to Area V, the teacher may cover some components of Area VI, in that case do not repeat these questions.)

1. We understand that current day students are extensively using the net and digital technology for educational purposes, we would like to understand what you feel about this.
2. What kind of impact has this had on learning outcomes? Positive or negative or both? Please elaborate.
3. Do you feel that students can afford to be less prepared and less engaged in class as they have extremely easy access to information?
4. How has it affected their retention capability?
5. How has it affected their mathematical capabilities?
6. How has it impacted their attention span and classroom attentiveness?
7. Has it had any impact on their diligence?

8. What has been the impact of AI in helping students complete assignments?
9. How has it impacted their engagement with teachers and the authority figures as they are as knowledgeable, if not more knowledgeable than them, as they now have easy access to information?

VII. Area of exploration: Student exposure to inputs on safe digital engagement

1. Have your students been exposed to any inputs on safe digital engagement in the school? Yes/No?
2. If yes, who/which organisation/school teachers/school authorities has provided these inputs?
3. What was the content of these inputs?
4. What is your opinion of these inputs? Were these well-conceived? Well delivered?
5. Are you aware of any child/children who has/have actually used these inputs? Yes/No?
6. If yes, how?
7. Is there any information on safe digital engagement in the school curriculum?

VIII. Area of exploration: Mechanisms for monitoring digital engagement

1. Are you aware of the different approaches and mechanisms parents are adopting to monitor the digital engagement of the children you are teaching? Yes/No?
2. If yes, how did you get to know about this? Through the parents? From the children?
3. What are the different mechanisms they are using? *(Probe: do these pertain to setting boundaries in terms of time; in terms of type of digital engagement; types of games allowed; types of videos that can be watched; age at which social media engagement is permitted; amount of sharing allowed; parents to be allowed to follow their children on different social media;see what their children are posting, etc. Are there settings on devices that prevent children from accessing some sites?)*
4. Do you think these mechanisms are effective? Yes/No *(Suggestions for effective monitoring are covered in the next section but if the teacher wants to talk about it here, allow it.)*

IX. Area of exploration: Awareness of laws and policies pertaining to children's digital engagement

1. Are you aware of the existence of any laws and policies pertaining to children's digital engagement? Yes/No
2. If yes, can you tell us what you know about these?

3. Do you know at what age children are allowed to get onto social media platforms? Yes/No
4. If yes, what age?
5. Are you aware of any cases of cyberbullying in the class/es you teach? Yes/No
6. If yes, please elaborate.
7. Are you aware of any authorities the children can approach in case of adverse online experiences? Yes/No
8. If yes, what are these?

X. Area of exploration: Recommendations and guidelines for safe and healthy digital engagement

(Please use the following questions as probes and contextually where you think these are relevant.)

1. Do you feel the school and teachers have any role to play in enabling safe and healthy digital engagement of students? Yes/No
2. If yes, do you have any suggestions?
3. What do you think is the right age to initiate any form of digital engagement?
4. At what age should children be given their own devices?
5. What kind of monitoring mechanisms should parents put in place?
6. Do you have any suggestions for children to self-regulate their digital engagement? Please elaborate.
7. In your opinion, what would be an ideal support system for children to deal with online issues?
8. Will you be interested in teacher training to enhance your knowledge and skills in promoting healthy online engagement?
9. Do you think parents and teachers need inputs of laws and policies surrounding the digital engagement of adolescents?
10. Do you think your school should consider conducting awareness programmes on digital education and safety for students and parents through workshops and seminars? This could help understand the benefits and potential risks of adolescents' digital engagement.
11. Should your school engage the relevant bodies to create parental monitoring tools and educational material to assist parents in guiding their online behaviour?
12. Are you aware of the existence of external support helplines and hotlines in the city/village that provide support and guidance to adolescents for dealing with online safety concerns, cyberbullying, etc.? Yes/No.
13. If not, do you think you would like access to this information and would you be interested in sharing this with your parents and students?

14. Should your school set up a student support and counselling mechanism for children dealing with issues pertaining to digital engagement: cyberbullying; addiction?
15. Should students be involved in awareness campaigns in this regard?
16. Will your school consider a peer support and mentoring programme to guide adolescents in navigating the online world safely and responsibly?

Parent Survey Questionnaire

I. Area of enquiry: Background Information

1. First Name:
2. Last Name:
3. Age:
    - ☐ Under 25 years
    - ☐ 25 to 35 years
    - ☐ 36 to 45 years
    - ☐ 46 years and above
4. Gender:
    - ☐ Woman
    - ☐ Man
    - ☐ Transgender
    - ☐ Non-binary
    - ☐ Prefer not to state
    - ☐ Other: _____
5. Marital status
    - ☐ Married
    - ☐ Separated
    - ☐ Divorced
    - ☐ Widowed
    - ☐ Single
    - ☐ Prefer not to state
6. Place of residence
    - ☐ Bengaluru Rural
    - ☐ Bengaluru Urban
7. Name of child with whom the FGD was conducted:
8. Age of the child
    - ☐ 10 to 12 years
    - ☐ 13 to 14 years
    - ☐ 15 to 16 years
    - ☐ 17 years and above
9. Type of school:
    - ☐ Government
    - ☐ Private
10. Personal email address:

11. Phone Number:

II. Area of enquiry: Overview of types of digital engagement

1. Does your child have any digital engagement, i.e., does your child spend time on online activities?
   - ☐ Yes
   - ☐ No

2. If yes, please indicate what type of online activities your child engages in. *(Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the activity.)*
   - ☐ Playing online games (Candy Crush, Call of Duty, Minecraft, Clash of Clans, etc.)
   - ☐ Watching videos on different sites (YouTube, Instagram, etc.)
   - ☐ Spending time on different social media platforms (Facebook, Instagram, WhatsApp, etc.)
   - ☐ Browsing the net for entertainment
   - ☐ Browsing the net for information or for educational purposes
   - ☐ Independent online shopping
   - ☐ Other: _____

3. Does your child play online games on different sites, platforms and apps?
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

4. Are you aware of which online games your child plays?
   - ☐ Yes
   - ☐ No
   - ☐ NA

5. If yes, please indicate which games your child plays from the list below. *(Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the game.)*
   - ☐ BGMI
   - ☐ Free Fire
   - ☐ Call of Duty

- ☐ Fortnite
- ☐ Minecraft
- ☐ Subway Surfers
- ☐ Roblox
- ☐ FIFA
- ☐ Chess (Online)
- ☐ Ludo King
- ☐ Candy Crush Saga
- ☐ Clash of Clans
- ☐ Carrom
- ☐ Temple Run
- ☐ Mech Arena
- ☐ Other: _____

6. Does your child watch videos on different internet sites and platforms?
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

7. Are you aware of which sites your child watches videos on?
   - ☐ Yes
   - ☐ No
   - ☐ NA

8. If yes, what are the sites and platforms your child is engaging with in an individual capacity?
   (Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the site and/or platform.)
   - ☐ YouTube
   - ☐ Instagram
   - ☐ Netflix
   - ☐ Amazon Prime Video
   - ☐ Disney + Hotstar
   - ☐ Zee5
   - ☐ Other: _____

9. Is your child active on social media platforms?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know

10. Are you aware of which social media platforms your child is active on?
    - ☐ Yes
    - ☐ No
    - ☐ NA

11. If yes, which social media platforms?
    (Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the social media platform.)
    - ☐ Instagram
    - ☐ Snapchat
    - ☐ YouTube
    - ☐ WhatsApp
    - ☐ Facebook
    - ☐ X (formerly Twitter)
    - ☐ Reddit
    - ☐ Other: _____

12. Does your child browse the net for entertainment?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know

13. Are you aware of which sites your child browses for entertainment?
    - ☐ Yes
    - ☐ No
    - ☐ NA

14. If yes, which are these sites?
    (Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other' and specify the entertainment site/s.)
    - ☐ Discord
    - ☐ Spotify
    - ☐ Google

- ☐ Pinterest
- ☐ Pixel Art
- ☐ Other: _____

15. Does your child browse the net for accessing information and for educational purposes?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know

16. Are you aware of which sites your child accesses for information and education purposes?
    - ☐ Yes
    - ☐ No
    - ☐ NA

17. If yes, which are these sites?
    (Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the educational site/s.)
    - ☐ Khan Academy
    - ☐ Wikipedia
    - ☐ Mindspark
    - ☐ Libby
    - ☐ Google Scholar
    - ☐ Google Classroom
    - ☐ Britannica
    - ☐ Duolingo
    - ☐ ChatGPT
    - ☐ Other: _____

18. Does your child do any independent online shopping, i.e., when you are not present?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know

19. Are you aware of which online shopping platforms and apps your child uses independently?
    - ☐ Yes

- ☐ No
- ☐ NA

20. If yes, what are the different shopping platforms and apps your child uses independently?
    (Please check all appropriate responses. If none are applicable, or anything more is applicable, choose 'Other', and specify the shopping platform.)
    - ☐ Flipkart
    - ☐ Amazon
    - ☐ Myntra
    - ☐ Ajio
    - ☐ Swiggy
    - ☐ Dunzo
    - ☐ Zomato
    - ☐ Instagram shopping
    - ☐ Meesho
    - ☐ Other: _____

21. On which type of online activity does your child spend the MOST time?
    (Please check all appropriate responses.)
    - ☐ Playing online games (Candy Crush, Call of Duty, Minecraft, Clash of Clans, etc.)
    - ☐ Watching videos on different sites (YouTube and/or other sites)
    - ☐ Spending time on different social media platforms (Facebook, Instagram, WhatsApp, etc.)
    - ☐ Browsing the net for entertainment
    - ☐ Browsing the net for information or for educational purposes
    - ☐ Independent online shopping
    - ☐ None of the above
    - ☐ Other: _____

22. On which type of online activity does your child spend the LEAST time?
    (Please check all appropriate responses.)
    - ☐ Playing online games (Candy Crush, Call of Duty, Minecraft, Clash of Clans, etc.)
    - ☐ Watching videos on different sites (YouTube and/or other sites)
    - ☐ Spending time on different social media platforms (Facebook, Instagram, WhatsApp, etc.)

- ☐ Browsing the net for entertainment
- ☐ Browsing the net for information or for educational purposes
- ☐ Independent online shopping
- ☐ None of the above
- ☐ Other: _____

23. Which type of online activity does your child spend NO TIME on?
(Please check all appropriate responses.)
    - ☐ Playing online games (Candy Crush, Call of Duty, Minecraft, Clash of Clans, etc.)
    - ☐ Watching videos on different sites (YouTube and/or other sites)
    - ☐ Spending time on different social media platforms (Facebook, Instagram, WhatsApp, etc.)
    - ☐ Browsing the net for entertainment
    - ☐ Browsing the net for information or for educational purposes
    - ☐ Independent online shopping
    - ☐ None of the above
    - ☐ Other: _____

24. Approximately, how much time does your child spend online per day?
    - ☐ No time
    - ☐ Less than 1 hour
    - ☐ From 1 hour up to 2 hours
    - ☐ From 2 hours up to 4 hours
    - ☐ From 4 hours up to 6 hours
    - ☐ More than 6 hours

25. What are the reasons for spending time online?
(Please check all appropriate responses. If anything more is applicable, choose 'Other', and specify the details on any other reasons your child spends time online.)
    - ☐ My child does not go online
    - ☐ Socialising
    - ☐ Entertainment
    - ☐ Information and learning
    - ☐ Hobbies and interests
    - ☐ Media consumption
    - ☐ Personal expression and creativity
    - ☐ Independent online shopping

- ☐ Online learning and skill development
- ☐ Seeking support and advice
- ☐ Seeking validation
- ☐ Keeping up with trends
- ☐ Mechanism for keeping my child occupied while I am preoccupied with other tasks and responsibilities
- ☐ Other: _____

III. Area of enquiry: Device usage and age of online engagement

1. At what age did your child start using the internet:
   - ☐ Less than 6 years
   - ☐ 6 to 8 years
   - ☐ 9 to 11 years
   - ☐ 12 to 14 years
   - ☐ 15 to 17 years
   - ☐ 18 years and above

2. Does your child have their own device?
   - ☐ Yes
   - ☐ No

3. If yes, what is the device?
   (Please check all appropriate responses.)
   - ☐ Smart phone
   - ☐ Tablet
   - ☐ Computer - laptop/desktop
   - ☐ Other: _____

4. If yes, at what age did you give your child a device?
   - ☐ 0 to 6 years
   - ☐ 7 to 9 years
   - ☐ 10 to 12 years
   - ☐ 13 to 15 years
   - ☐ 16 to 18 years

5. If your child does not own a device, whose device does your child use?
   (Please check all appropriate responses. If anything more is applicable, choose 'Other', and specify the details of whose device your child uses.)
   - ☐ Parents
   - ☐ Grandparents
   - ☐ Siblings
   - ☐ Other relatives
   - ☐ Friends
   - ☐ Other: _____

IV. Area of enquiry: What is the impact of online engagement on your child?

1. Can you describe the main impact of online engagement on your child? Has it been:
   - ☐ Mostly positive
   - ☐ Mainly negative
   - ☐ Both positive and negative
   - ☐ No impact
   - ☐ Don't know

2. If there has been a positive impact, please indicate some of these from the list below:
   (Please check all appropriate responses. If anything more is applicable, choose 'Other', and specify the details of the kind of positive impact.)
   - ☐ It makes my child happy to be online
   - ☐ It is a low cost, easily accessible form of entertainment
   - ☐ It has built skills that my child can use now, and in the future
   - ☐ It has given my child the opportunity to develop interests
   - ☐ It is an outlet for my child's creativity
   - ☐ It has given my child easy access to very useful information
   - ☐ It has improved my child's academic performance
   - ☐ It is an easy way of getting in touch with many people at one time
   - ☐ It is an economical and effective way of gaining exposure and building relationships with people from different countries and cultures
   - ☐ It has helped my child to build a community and/or many circles of friends that is not possible in the real world
   - ☐ None of the above
   - ☐ Other: _____

3. If there has been a negative impact, please indicate some of these from the list below:
   (Please check all the appropriate responses. If anything more is applicable, choose 'Other', and specify the details of the kind of negative impact.)
   - ☐ My child has become sulky and withdrawn
   - ☐ My child prefers to be on a device than communicate with the family in person
   - ☐ My child does not want to meet friends in person
   - ☐ My child is not able to make new friends in the offline world
   - ☐ My child finds it hard to make eye contact
   - ☐ My child wants to be left alone with a device without being monitored on the type of online activity
   - ☐ My child does not want me to monitor the amount of time spent on online devices
   - ☐ My child has become angry and quarrelsome about my monitoring
   - ☐ My child is showing signs of digital addiction
   - ☐ My child has developed the tendency of constant comparison with others
   - ☐ Being online has made my child feel inadequate in terms of physical appearance
   - ☐ Being online has made my child feel inadequate in terms of personal lifestyle, like clothes, accessories, holiday venues, etc.
   - ☐ My child feels the need to eat and drink what is seen online
   - ☐ Being online has made my child feel inadequate in terms of personal achievements
   - ☐ My child has experienced online bullying
   - ☐ My child has developed mental health issues due to being online
   - ☐ Strangers have tried to contact my child online
   - ☐ My child's sleep cycle has been affected
   - ☐ Because of being online, my child has developed a short attention span and is easily distracted
   - ☐ Being online has adversely affected my child's academic performance
   - ☐ Being online has given my child the opportunity to access age-inappropriate content
   - ☐ None of the above
   - ☐ Other: _____

4. Please answer this question only if your child goes to the learning centre for children with diverse needs. Please check the statements you agree with:
    - ☐ Being online has helped my child engage with and access people and spaces which would not be possible in the offline world
    - ☐ Being online has enabled inclusion
    - ☐ Being online has helped my child engage with children without diverse needs in an equal way
    - ☐ Being online has helped my child to take up and pursue interests that would have not been otherwise possible
    - ☐ Being online has not had any impact on my child
    - ☐ Being online has given my child access to age-inappropriate content
    - ☐ Other: _____

5. Is there anything you would like to say regarding changes you are seeing because of children's online engagement in general and your child's engagement in particular? *(All parents are requested to answer this question)*

V. Area of enquiry: Child's exposure to inputs on safe online digital engagement

1. In the school, has your child been exposed to any inputs on safe online digital engagement?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know

2. If yes, do you know who gave your child these inputs?
(Please check all the appropriate responses.)
    - ☐ School teachers/staff
    - ☐ An outside organisation that visited the school
    - ☐ Don't know

3. If yes, did your child tell you what these inputs were?
    - ☐ Yes
    - ☐ No

4. If yes, did these inputs pertain to the following?
(Please check all the appropriate responses. If anything more is applicable, choose 'Other', and specify the details on what inputs were provided to your child.)
    - ☐ Digital citizenship

- ☐ Not disclosing passwords on websites
- ☐ Not opening unsafe websites or unsecured websites
- ☐ Not accepting cookies while getting on to websites
- ☐ Being mindful about what you are uploading online
- ☐ Not sharing personal information online
- ☐ Information technology laws
- ☐ Other: _____

5. If yes, what is your opinion on these inputs?
   - ☐ Very useful
   - ☐ Useful
   - ☐ Not at all useful
   - ☐ Don't know

VI. Area of enquiry: Child's offline hobbies and activities

1. Does your child spend any free time offline?
   - ☐ Yes
   - ☐ No

2. If yes, on average, how much time per day does your child spend on offline hobbies and activities?
   - ☐ 0 to 2 hours
   - ☐ 3 to 4 hours
   - ☐ More than 4 hours

3. What are the different hobbies and activities your child pursues offline?
   (Please check all the appropriate responses. If anything more is applicable, choose 'Other', and specify the details on what your child does offline.)
   - ☐ Reading
   - ☐ Sports
   - ☐ Board games
   - ☐ Art
   - ☐ Theatre
   - ☐ Dancing
   - ☐ Meeting friends
   - ☐ Don't know
   - ☐ None of the above

☐ Other: _____

VII. Area of enquiry: Monitoring your child's online engagement

1. Do you monitor your child's online engagement?
   - ☐ Yes
   - ☐ No

2. If yes, what do you monitor?
   (Please check all the appropriate responses. If anything more is applicable, choose 'Other', and specify the details on what you monitor.)
   - ☐ The amount of time your child spends online
   - ☐ The types of games your child plays
   - ☐ The sites your child visits
   - ☐ The content your child produces online
   - ☐ The content your child consumes online
   - ☐ Other: _____

3. How do you monitor your child?
   (Please check all the appropriate responses. If anything more is applicable, choose 'Other', and specify how else you monitor your child.)
   - ☐ You set the ground rules regarding time and content and trust your child to follow them
   - ☐ You have set up the device with fingerprint/password/face recognition protection so your child cannot open the device without you allowing it
   - ☐ You periodically check the amount of time your child spends online
   - ☐ You take away the device after the allocated time is over
   - ☐ You set the device up to switch off after a certain time
   - ☐ You watch your child continuously while online
   - ☐ You regularly check the content your child is consuming online
   - ☐ You regularly check the content your child is posting online
   - ☐ If you find your child playing a forbidden game, you punish them
   - ☐ You set the device up in a way where it prevents access to forbidden sites and platforms
   - ☐ You allow your child to be active on social media platforms only if you are included
   - ☐ None of the above
   - ☐ Other: _____

4. How does your child respond to your monitoring approach?
    - ☐ Usually positively
    - ☐ Usually negatively
    - ☐ Sometimes positively and sometimes negatively

VIII. Area of enquiry: Awareness of laws and policies regarding online engagement of adolescents

1. Are you aware of any laws and policies regarding adolescents' online engagement to ensure that they are safe?
    - ☐ Yes
    - ☐ No

2. If yes, can you please elaborate?

IX. Area of enquiry: Recommendations for promoting safe and healthy digital engagement

1. What do you think is the right age to initiate any form of digital online engagement?
    - ☐ 0 to 2 years
    - ☐ 3 to 5 years
    - ☐ 6 to 8 years
    - ☐ 9 to 11 years
    - ☐ 12 to 14 years
    - ☐ 15 years and above

2. What do you think is the right age to give a child their own online device?
    - ☐ 0 to 8 years
    - ☐ 7 to 9 years
    - ☐ 10 to 12 years
    - ☐ 13 to 15 years
    - ☐ 16 years and above

3. Do you think it is possible given professional and personal demands for you to set a positive example by demonstrating responsible online behaviour yourself where you practise healthy online habits?
    - ☐ Yes
    - ☐ No

- ☐ NA

4. Do you think it is important for you to engage in shared online activities with your child by playing age-appropriate online games together, watching videos, or exploring educational content?
   - ☐ Yes
   - ☐ No
   - ☐ NA

5. Do you think it is important to stay informed and updated regarding the latest online trends, apps, and platforms that your child may be using?
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

6. Do you need any inputs on how to use parental control tools, privacy settings, and age-appropriate filters to create a safer online environment?
   - ☐ Yes
   - ☐ No

7. Do you need expert help in establishing open and ongoing communication and trust with your child regarding online engagement?
   - ☐ Yes
   - ☐ No

8. Do you have any suggestions for children to self-regulate their online digital engagement? Please elaborate.

9. Do you need inputs from experts in enabling children's self-regulation of online digital engagement?
   - ☐ Yes
   - ☐ No

10. Do you think children with physical and intellectual disabilities need different monitoring mechanisms?
    - ☐ Yes
    - ☐ No

11. Do you need inputs from experts for effective monitoring of children with physical and intellectual disabilities (Please answer this question only if your child attends the Learning Centre for Children with Diverse Needs?
    - ☐ Yes
    - ☐ No

12. Are you aware of the signs of digital addiction? (The way individuals are addicted to drugs and alcohol, it is also possible they can get addicted to being online through digital devices.)
    - ☐ Yes
    - ☐ No

13. Would you like information on the signs of digital addiction?
    - ☐ Yes
    - ☐ No

14. Do you need information on laws and policies surrounding the digital engagement of children?
    - ☐ Yes
    - ☐ No

15. Do you think different laws and policies need to be created for children with physical and intellectual disabilities?
    - ☐ Yes
    - ☐ No

16. Should your child's school conduct awareness programmes on digital education and safety for students and parents through workshops and seminars?
    - ☐ Yes
    - ☐ No

17. Should your child's school employ expert bodies to create parental monitoring tools and educational material to assist parents in guiding children's online behaviour?
    - ☐ Yes
    - ☐ No

18. Do you want information on support helplines and hotlines in the city/village that provide support and guidance to children for dealing with online safety concerns, addiction, online bullying, etc.?
    - ☐ Yes
    - ☐ No

19. Should your child's school set up a student support and counselling mechanism for children dealing with issues pertaining to digital engagement: online bullying; addiction?
    - ☐ Yes
    - ☐ No

20. Should students be involved in awareness campaigns regarding safe and healthy digital and online engagement?
    - ☐ Yes
    - ☐ No

21. Do you think a peer support and mentoring programme to guide adolescents in navigating the online world safely and responsibly should be set up in your child's school?
    - ☐ Yes
    - ☐ No

22. Would you join a parent peer support group at the school or other locations that dealt with parenting problems including safety and addictions?
    - ☐ Yes
    - ☐ No

23. Do you have any other suggestions or recommendations for promoting safe and healthy online digital engagement? Please elaborate.

Annexure 3: Age of Digital Engagement and Access to Devices

Table A3:1: Children who initiated their digital engagement between 12 and 14 years

Type of school	Percentage (n = 24)
Learning Centre for CWDN	21% (5)
Rural Government School	17% (4)
English Medium Urban Government School	25% (6)
Kannada Medium Urban Government School	17% (4)
Urban International School	4% (1)
Urban Private School	17% (4)

Figure A3:1: Parents' opinion on the right age for initiation of digital engagement

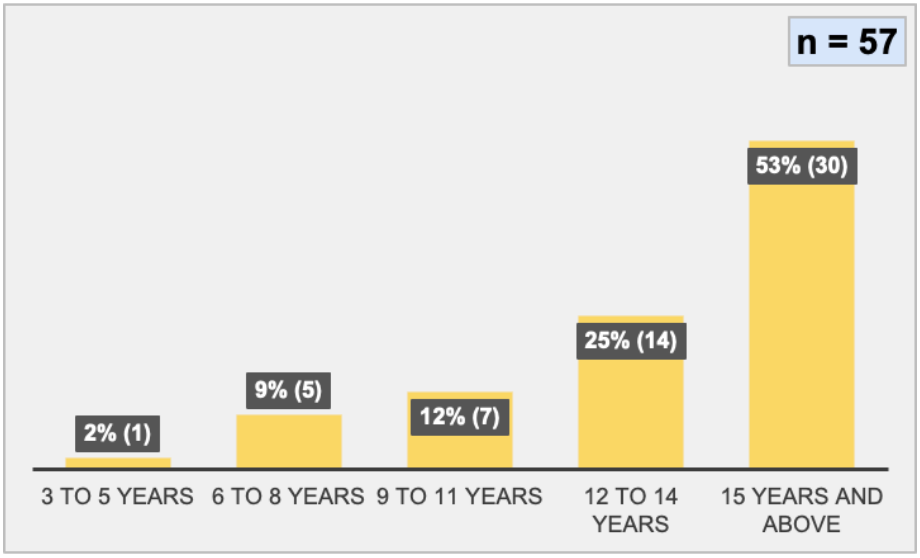


Figure A3:2: Percentage of parents whose children possess a digital device

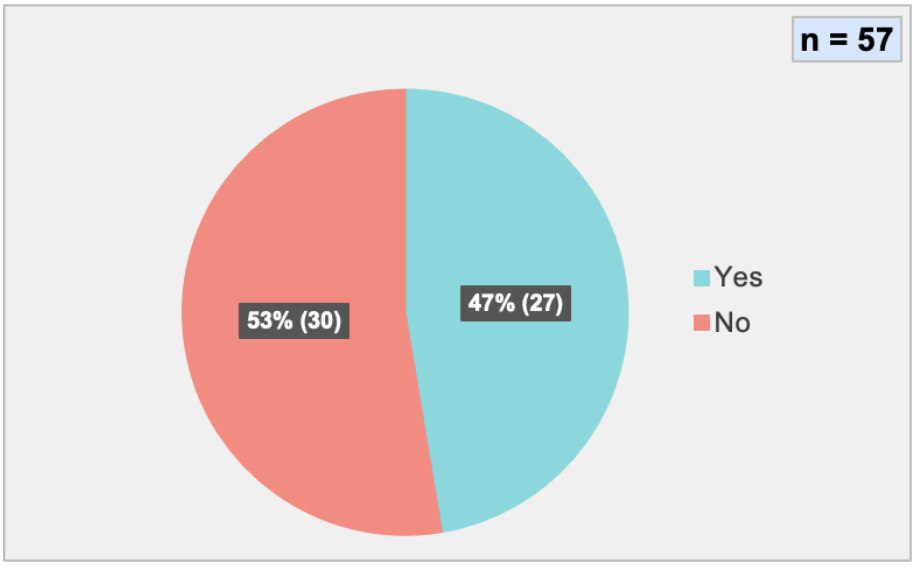
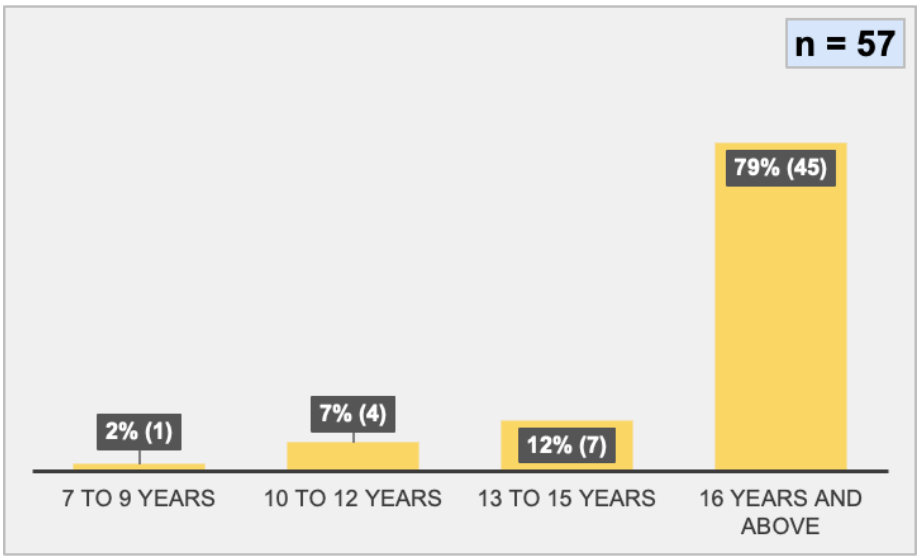


Figure A3:3: Parents' opinion on the right age to give children a personal device



Annexure 4: Synergies in the Stakeholder Responses

	No synergy between any of the stakeholders. This indicates that the stakeholder labelled in red (children, parents or teachers) is **more aware** of certain themes or sub-themes depicted in the chart.
	Low synergy between two or more stakeholders. This indicates that very few parents and teachers agreed with the children on a particular theme or sub-theme, i.e, parents and teachers were **poorly aware** of what the children said. In the case of the column titled, 'Parents and Teachers', yellow indicates that there were a small number of parents and teachers who agreed with each other.
	Moderate synergy between two or more stakeholders. This indicates that there were a larger number of parents and teachers who agreed with the children on certain themes and sub-themes, i.e, parents and teachers were **somewhat aware** of what the children said. In the case of the column titled, 'Parents and Teachers', light green indicates that there were a larger number of parents and teachers who agreed with each other.
	High synergy between two or more stakeholders. This indicates that there were a large number of parents and teachers who agreed with the children on certain themes and sub-themes, i.e, parents and teachers were **highly aware** of what the children said. In the case of the column titled, 'Parents and Teachers', dark green indicates that there were a large number of parents and teachers who agreed with each other.
	Little to no awareness among stakeholders on certain domains, themes or sub-themes.

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
1	Entry into the Digital World	Digital Engagement Initiation Age	-							
		Age of Device Possession[36]	-							
2	Understanding the Nature of Digital Engagement	Reasons Adolescents go Online (Children provided a more detailed picture, compared to parents and teachers)	Education and access to information							
			Online learning and skill development							
			Entertainment							
			Socialising							
			Validation							
			To address emotional issues							
			To browse shopping sites							

[36] The comparison between children, parents' and teachers' responses were separated into the categories 'children and parents' and 'children and teachers' in order to capture the differences in synergies between children and these adult stakeholders.

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Personal expression and creativity							
			Hobbies and interests							
			To relax							
			To prevent FOMO							
			For instant gratification							
			To access to remote and interesting lifestyles							
			To find sources of inspiration							
			To look for job opportunities							
			To earn money							
			Media consumption							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			To learn about what is missing in their lives							
			To be influenced by people							
			To keep up with trends							
		Components of Digital Engagement (Children provided a more detailed picture, compared to parents and teachers)	Watching videos							
			Browsing for information and access to education							
			Browsing for entertainment							
			Playing online games							
			Social media platforms							
			Independent online shopping							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Following influencers							
3	Adolescents' Engagement with Offline Activities	Types of Offline Activities	Sports							
			Board games and local games							
			Meeting friends							
			Playing with siblings							
			Reading							
			Art							
			Dance							
			Music							
			Household chores							
			Relaxing							
			Sleeping							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
		Time Spent Offline	-							
		Time Spent Online	-							
4	Impact of Digital Engagement	Nature of Communities Built Online	-							
		Positive Impacts	Enables communication							
			Enhances and promotes creativity and self-expression							
			Enables hobby and skill development							
			Access to educational information							
			Easy access to entertainment							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Helps relax and decompress							
			Access to information on interests							
			Development of life skills							
			Language development							
			Access to information on future opportunities							
			Access to different personalities and lifestyles							
			Fulfils curiosity							
			Improved general knowledge and awareness of social issues							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Platform to run a business and earn money							
			Time management							
			Validation							
			Easy access to shopping							
			Access to payment gateways							
		Negative Impacts	Strain on relationships							
			Loss of focus on academics							
			Loss of sleep							
			Less time spent on offline activities							
			Feeling trapped and addicted							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Making comparisons between oneself and online portrayals[37]							
			Decreased attention span							
			Visceral and physical impacts							
			Exposure to inappropriate content							
			Contact from strangers							
			Loss of money							
			Cyberbullying and hacking							
			Declined language skills							

[37] The comparison between children, parents' and teachers' responses were separated into the categories 'children and parents' and 'children and teachers' in order to capture the differences in synergies between children and these adult stakeholders.

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Experiencing FOMO							
			Surfacing of negative emotions							
			Inability to be authentic online							
			Access to fake and confusing information							
			Intimate relationships with adults							
			Difficulty adjusting to school post-pandemic							
			Reduced creativity							
			Children are maturing faster							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
			Instigates violence							
5	Monitoring Mechanisms and their Efficacy	Monitoring Mechanisms	Time controls							
			Use of third-party applications and controls							
			Use of violence and threats							
			Checking search history							
			Watching the child							
			Not recharging the phone							
			Incentives							
		Efficacy of Monitoring Approaches	-							
6	Inputs for Enabling Safe Digital	Sources of Inputs	-							

S. No	Domain	Theme	Sub-Theme	Children, Parents and Teachers	Children and Parents	Children and Teachers	Children	Parents	Teachers	Parents and Teachers
	Engagement	Nature of Inputs	-							
		Utility of Inputs	-							
		Student-Led Initiatives to Promote Safe Digital Engagement	-							
7	Awareness of Laws and Policies Surrounding Safe Digital Engagement	-	-							

Annexure 5: Understanding Stakeholder Perceptions of Digital Engagement

Table A5:1: Comparing children and teachers' perceptions regarding the purpose of adolescents' digital engagement

S. No.	Broad Purpose	Students	Teachers
1	Entertainment	To communicate with friends and family	For staying connected (Cohort 2)
		To pass time and counter boredom when one is alone	It is an easily accessible entertainment source which counters boredom (Group 2, learning centre for CWDN and Cohorts 1, 2 and 3)
		To take personality tests	-
		To watch games and football content	
		To play games	
		To upload one's status on social media	
		To send, upload, and watch videos, anime, films and reels	
		-	Provides access to flashy entertainment (Cohort 2)
			Provides access to a variety of easily consumable packages of content (Cohort 2)
2	To develop varied skills	To become an influencer - *"I want people to know me, so I post videos online."* (Boy, Cohort 2, Class 8, English medium urban government school) To get subscribers on YouTube - *"I want to attain two to three million followers, and get a diamond plaque on YouTube."*	To get more followers and to enable image making (Cohort 1)

S. No.	Broad Purpose	Students	Teachers
		(Boy, Group 1, learning centre for CWDN)	
		"To learn how girls should look, behave and maintain themselves." (Girl, Cohort 2, Class 8, urban private school)	-
		To learn how to make videos	
		To learn skills of being focused and how to avoid distractions	
		To sharpen brain function - *"I use Magnet Brains to sharpen my brain function."* (Boy, Cohort 2, Class 8, urban private school)	
		To learn the correct pronunciation of English words (children from government schools)	
		To build one's vocabulary (children from government schools)	
		To learn how to code	
		To learn improvisation skills	
		To enhance sports skills	
		"To make magic like Amitabh Bachan." (Boy, Group 1, learning centre for CWDN)	
3	To relax	To escape from the offline world; to procrastinate and forget about studies *"You forget everything when you are online, it is a virtual happy space, an escape from the real*	Means of escape (Cohort 1)

S. No.	Broad Purpose	Students	Teachers
		world." (Girl, Cohort 1, Class 6, rural government school)	
		To decompress *"When you go around and you are preoccupied with many things and your head is spinning with many thoughts (tale kettiuththee), it is very relaxing to watch all these things online."* (Boy, Cohort 1, Class 6, rural government school)	-
4	To promote general knowledge and awareness, to access information on national and world events	For general knowledge and to learn about current events	From Group 2, learning centre for CWDN
		To access different perspectives. *"Our parents give us one perspective, and through online engagement, we get access to multiple perspectives."* (Girl from Cohort 3, Class 9, urban international school)	It provides exposure to the unknown (Cohort 3)
		To get information on national and state sports selections.	-
		To view trends on the stock market and learn how to invest in it (Boy, Group 2, learning centre for CWDN)	-
		-	Effective access to easily retrievable information (Group 2, learning centre for CWDN and Cohort 2)
5	To promote academic pursuits	To do homework and project work, solve academic problems, access question papers and free information, to reduce study	From Groups 1 and 2 from the learning centre for CWDN and Cohorts 1, 2 and 3

S. No.	Broad Purpose	Students	Teachers
		time, for research	
6	To prevent the fear of missing out (FOMO)	*"I am scared people are doing things that I don't know about, so I go online."* (Girl, Cohort 2, Class 8, urban international school)	To be a part of the crowd and to respond to peer pressure (Groups 1 and 2, learning centre for CWDN and Cohort 3) To assuage their curiosity about what people are doing (Cohorts 1 and 2)
7	For validation	From Cohort 2 (urban international school)	Groups 1 and 2 from the learning centre for CWDN and Cohorts 2 and 3
8	For instant gratification	An easy source of entertainment	From Groups 1 and 2 from the learning centre for CWDN
9	To connect with a range of issues	From Cohorts 2 and 3	From Cohort 3
10	Socialising	From Cohorts 1, 2 and 3	From Group 2 from the learning centre for CWDN and Cohorts 1, 2 and 3
11	To build on hobbies and interests	To learn songs and dances (largely girls)	-
		To learn about arts, crafts, cooking, bread making (largely girls)	
		To learn the rules of different sports	
		To learn about car restoration and how to fly planes	
12	To access remote and interesting lifestyles	To watch vlogs on how to maintain homes	-
		To follow the lives of famous admirable people	-
		To learn about how people feel	-

S. No.	Broad Purpose	Students	Teachers
13	To channel creativity	To write stories, speeches, books	-
14	To find sources of inspiration	This was largely articulated by children from Cohorts 2 and 3	-
15	To address emotional issues	To find solutions to emotional problems online by chatting with friends, teachers and ChatGPT (Cohorts 1 and 2)	-
16	To browse shopping sites	From Group 2 from the learning centre for CWDN and Cohorts 2 and 3	
17	To secure job opportunities and earn money	From Group 2 from the learning centre for CWDN and Cohorts 2 and 3 from government schools	-
18	To be influenced by other people	-	From Group 2 from the learning centre for CWDN
19	To learn what is trending	-	From Group 2 from the learning centre for CWDN and Cohorts 2 and 3 This makes them feel popular and cool - this is important because this is a teenage period where identities are being shaped and reshaped - *"The formation of self and identity is closely tied to what is happening around these teenagers. Hence, online digital engagement is pivotal to how their identity is built."* (Cohort 3, Grade 9, urban international school)
20	To learn about what is missing in their lives	-	From Group 2 from the learning centre for CWDN

Figure A5:1: Parents' perceptions on 'why' children go online

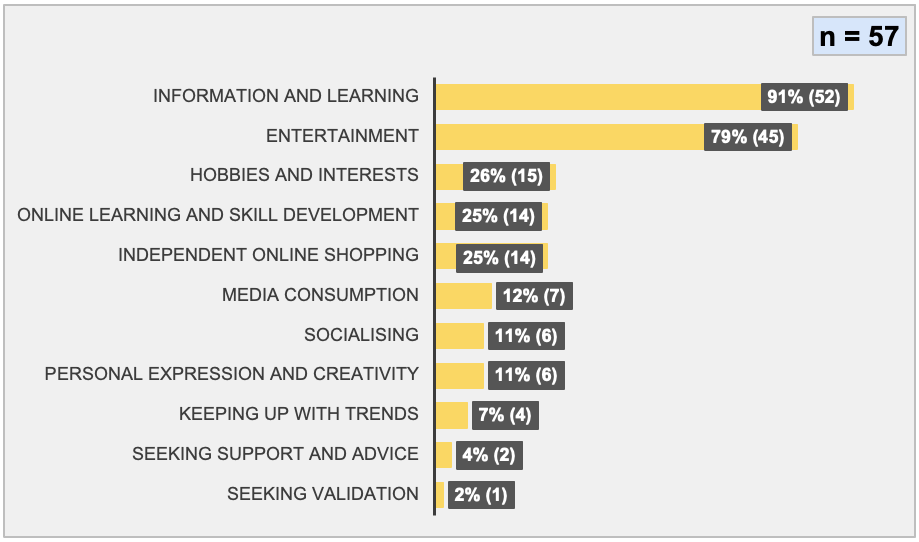


Figure A5:2: Parents' perceptions of children's online activities

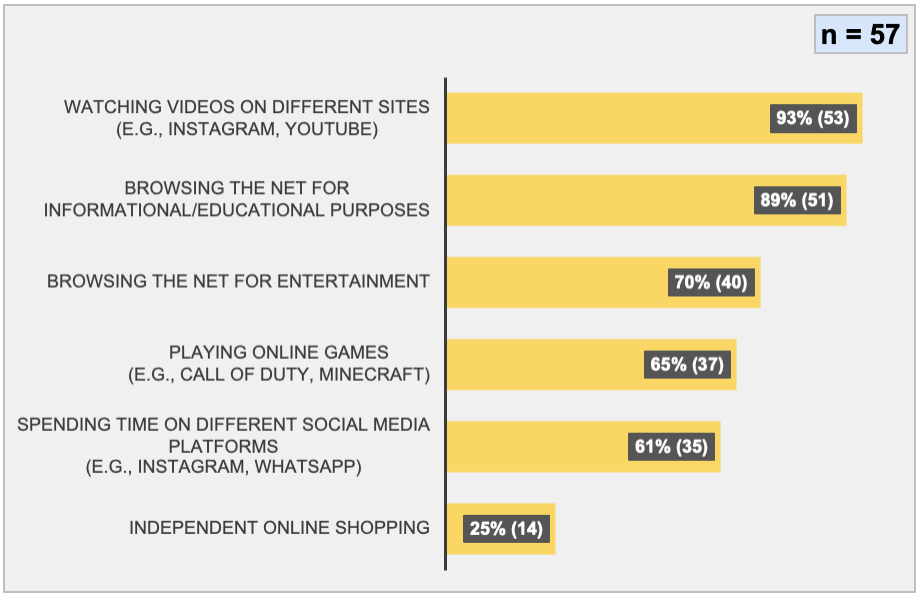
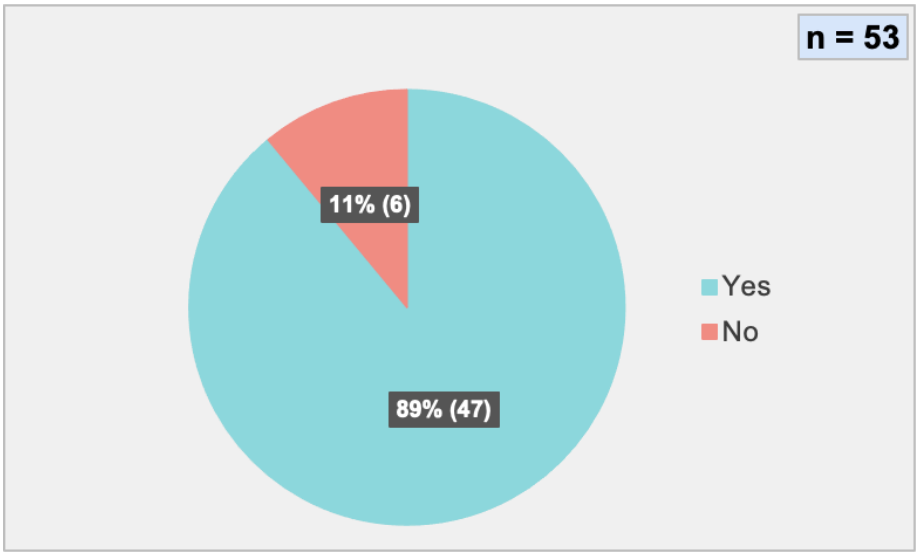


Figure A5:3: Parental awareness of the platforms children watch videos on



A5:4: Parents' listing of the platforms children independently watch videos on

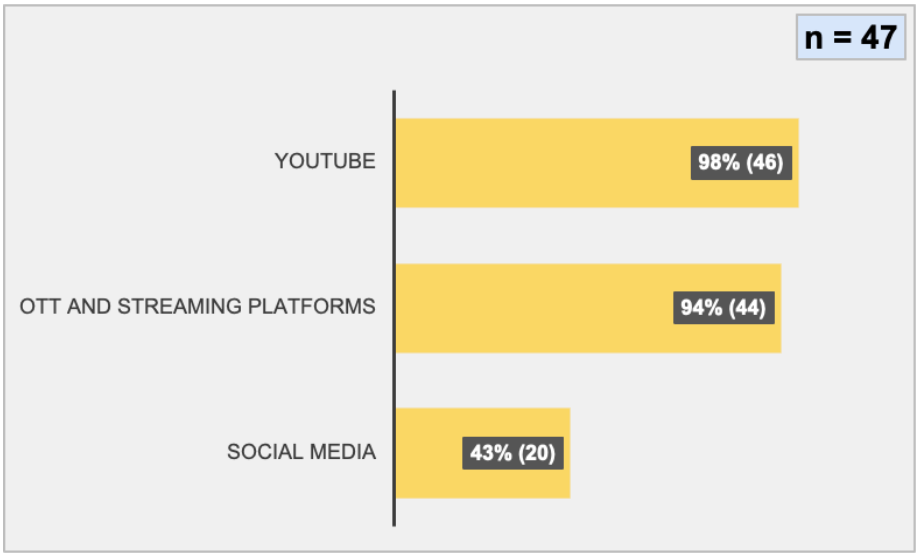


Table A5:2: Data procured from adolescents on educational and informational sites

S. No.	Category of Educational/ Informational Sites	Number of Sites (n = 52)	Most Popular Sites
1	Websites/Platforms for School Coursework for Schoolwork	22	YouTube Wikipedia
2	Platforms for Knowledge-Building and Skill Development	7	Duolingo Udemy
3	Coding Platforms	6	Python
4	Online Portals used by Schools	6	Google Classroom Mindspark
5	Educational Technology (EdTech) Platforms for School Work	5	Mindspark Magnet Brains
6	Artificial Intelligence	4	ChatGPT
7	Educational Aids	2	WhatsApp Focus Timer for Study

Figure A5:5: Parental awareness of which platforms children use for information/ educational purposes

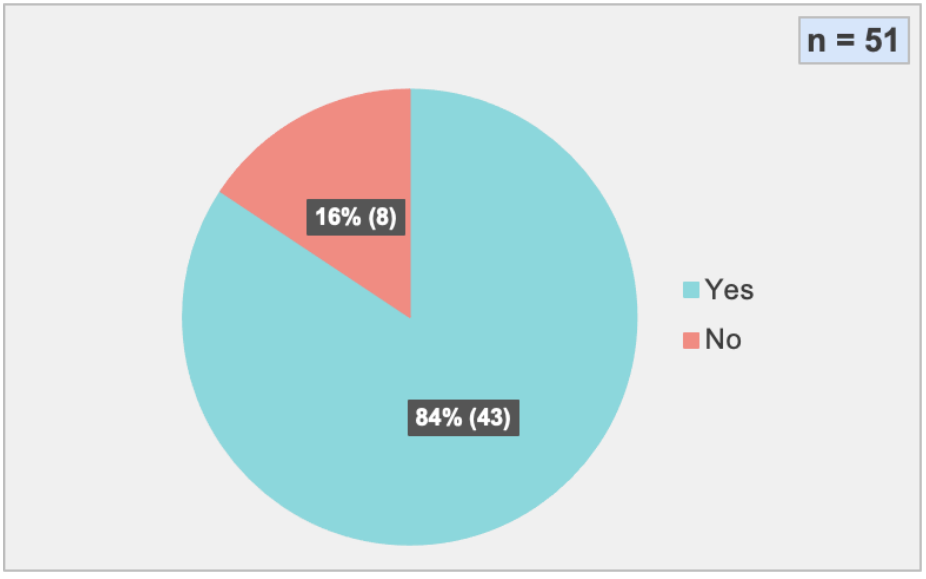


Table A5:3: Parents' perceptions of informational/educational platforms children use

S. No.	Type of informational/educational sites	Percentage of Parents (n = 43)
1	Websites/Platforms for Schoolwork (E.g., Britannica)	53% (23)
2	EdTech Platforms (E.g., Khan Academy)	47% (20)
3	Online Portals used by Schools (E.g., Google Classroom)	35% (15)
4	Social Media (E.g., WhatsApp)	28% (12)
5	AI Websites (E.g., ChatGPT)	23% (10)
6	YouTube	19% (8)
7	Knowledge-Building and Skill Development Platforms (E.g., Duolingo)	19% (8)
8	Google	12% (5)
9	Coding Platforms (E.g., Python)	2% (1)

Table A5:4: Information procured from adolescents regarding entertainment sites

S. No.	Category of Entertainment/ Creative Platform	Number of Sites (n = 24)	Most Popular Sites
1	Photo/Video Editing	9	InShot
2	Music	8	Spotify
3	Designing Platforms	2	Canva
4	Reading/Publishing Platforms	2	Kindle

S. No.	Category of Entertainment/ Creative Platform	Number of Sites (n = 24)	Most Popular Sites
5	Sports Websites	2	CricHeroes
6	Virtual Assistant Devices	1	Alexa

Figure A5:6: Parental awareness of which platforms children use for entertainment purposes

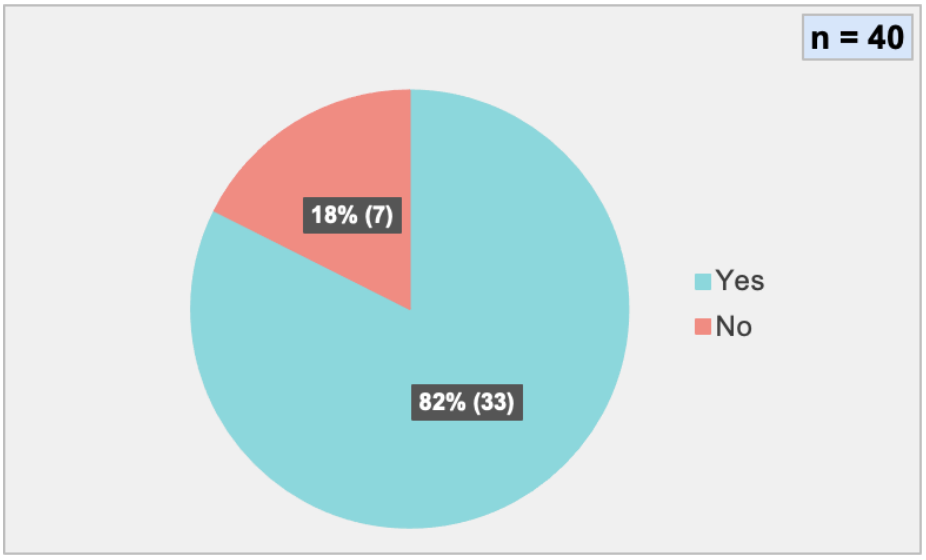


Table A5:5: Parental perceptions on entertainment platforms children use

S. No.	Type of entertainment platform	Percentage of Parents (n = 33)
1	Google	67% (22)
2	Social Media	42% (14)
3	YouTube	30% (10)
4	Music Streaming Platforms	24% (8)
5	OTT and Streaming Platforms	3% (1)
6	Games	3% (1)

Table A5:6: Adolescents' description of categories and examples of online games they play

S. No.	Category of Games	Number of Games (n = 98)	Most Popular Games
1	Violent Games	16	Free Fire Battlegrounds Mobile India (BGMI) Grand Theft Auto V (GTA V)
2	Strategy/Edutainment Games	15	Chess
3	Entertainment Games	10	Ludo Snakes & Ladders Carrom
4	Racing/Vehicular Games	7	Rocket League BUSSID
5	Creative Games	9	Minecraft Roblox
6	Sports Games	6	FIFA
7	Horror/Scary Games	6	Granny
8	Betting/Money games	6	Rummy Circle WinZo
9	Endless Running Games	5	Temple Run Subway Surfers
10	Puzzle Games	5	Candy Crush
11	Gaming Websites/ Multi-game Applications	4	Jalebi poki.com
12	Game Downloading Portals[38]	3	Steam
13	Virtual Pet Games	2	Talking Tom Talking Angela
14	Adventure Games	2	Pokémon GO

[38] These are not games, but children download games from here.

S. No.	Category of Games	Number of Games (n = 98)	Most Popular Games
15	Music Games	1	Piano Kids - Music & Songs
16	Religious Games	1	iMakkah

Figure A5:7: Parental awareness of which platforms children use for online gaming

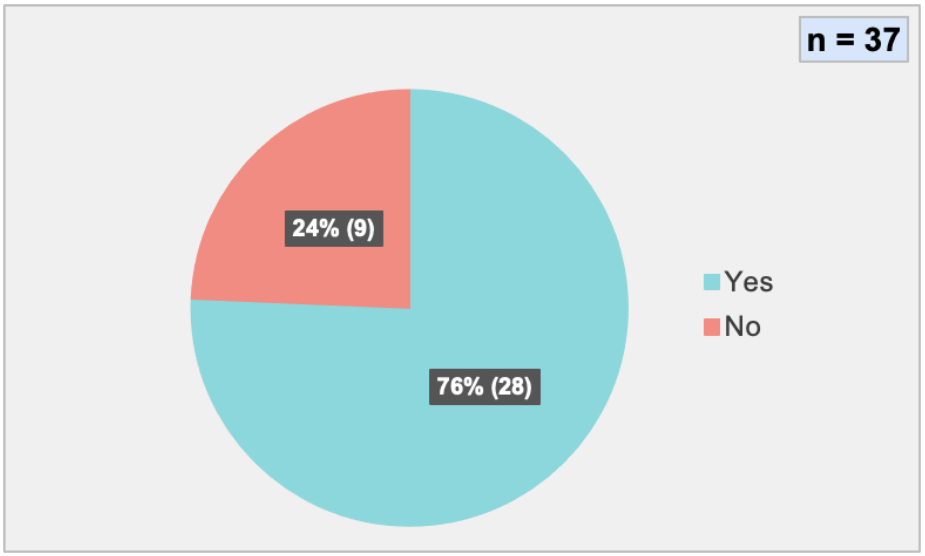


Table A5:7: Parental perceptions on types of online games children play

S. No.	Type of Game Played	Percentage of Parents (n = 28)
1	Violent Games (E.g., Free Fire)	50% (14)
2	Creative Games (E.g., Minecraft)	43% (12)
3	Strategy/Edutainment Games (E.g., Online Chess, Quiz Games)	36% (10)
4	Endless Running Games (E.g., Subway Surfers)	36% (10)
5	Entertainment Games (E.g., Ludo King)	32% (9)

S. No.	Type of Game Played	Percentage of Parents (n = 28)
6	Puzzle Games (E.g., Candy Crush)	25% (7)
7	Sports Games (E.g., FIFA)	21% (6)
8	Music Games (E.g., Piano Games)	4% (1)
9	Multipurpose Gaming Apps/Websites (E.g., Jalebi)	4% (1)

Figure A5:8: Parental awareness of the specific social media platforms children use

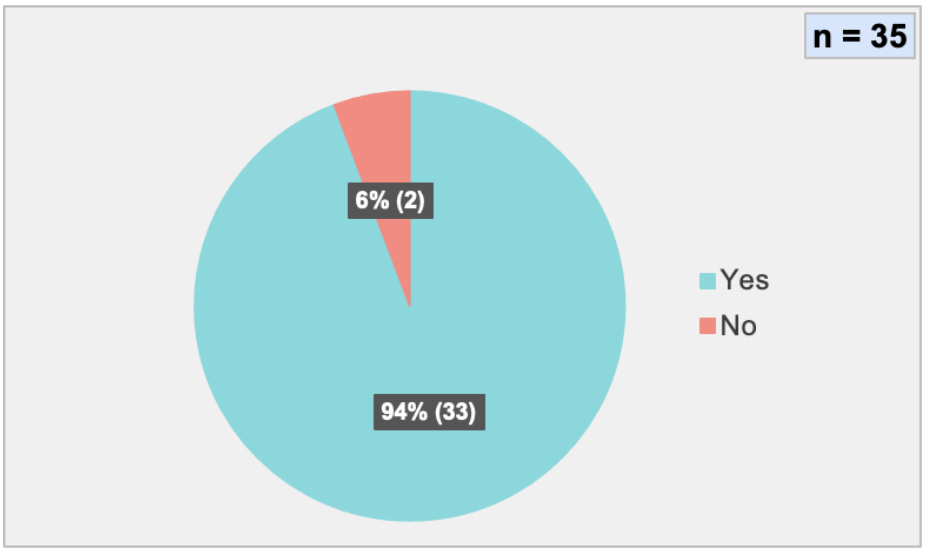


Table A5:8: Parental perceptions on social media platforms used by children

S. No.	Social Media Platform	Percentage of Parents (n = 33)
1	WhatsApp	70% (23)
2	Instagram	55% (18)
3	YouTube	45% (15)
4	Snapchat	24% (8)

S. No.	Social Media Platform	Percentage of Parents (n = 33)
5	Facebook	12% (4)
6	X (formerly Twitter)	6% (2)
7	Discord	3% (1)

Table A5:9: Adolescents' descriptions of online platforms used for independent online shopping

S. No.	Category of Online Shopping Platform	Number of Sites (n = 19)	Most Popular Sites
1	Fashion	7	Meesho Myntra
2	Food/Groceries	4	Zomato Swiggy
3	Multipurpose Shopping	3	Amazon
4	Shopping via Social Media	2	Reddit Instagram
5	Travel	2	TripAdvisor
6	Payments	1	PhonePe

Figure A5:9: Parental awareness of the shopping websites children visit

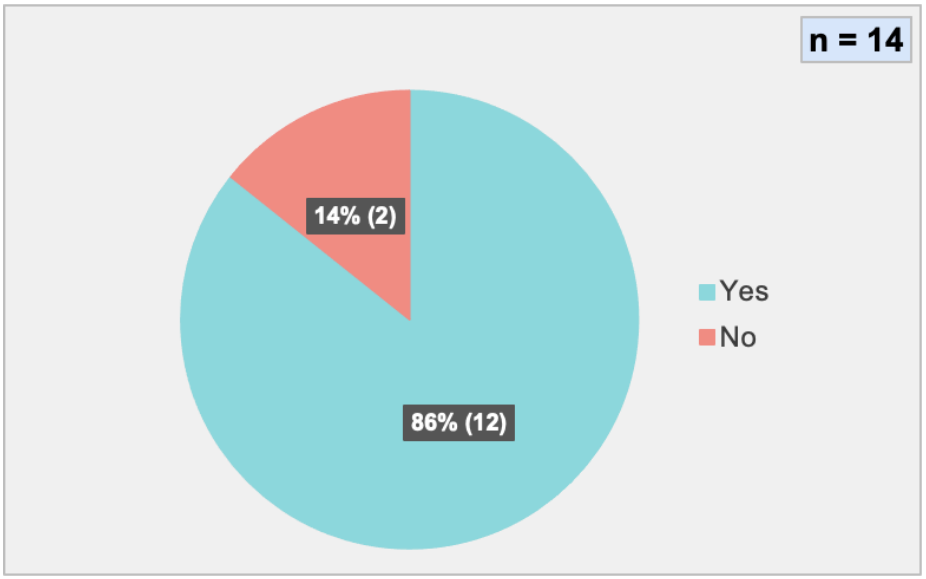


Table A5:10: Parental perceptions on types of online shopping platforms children used independently

S. No.	Type of Shopping Sites	Percentage of Parents (n = 12)
1	Multipurpose shopping (E.g., Amazon)	100% (12)
2	Food delivery apps	67% (8)
3	Clothing and accessories	50% (6)
4	Instagram shopping	8% (1)

Annexure 6: Parental Perceptions Regarding Adolescents' Offline Activities

Figure A6:1: Parents' knowledge of whether children spend time offline

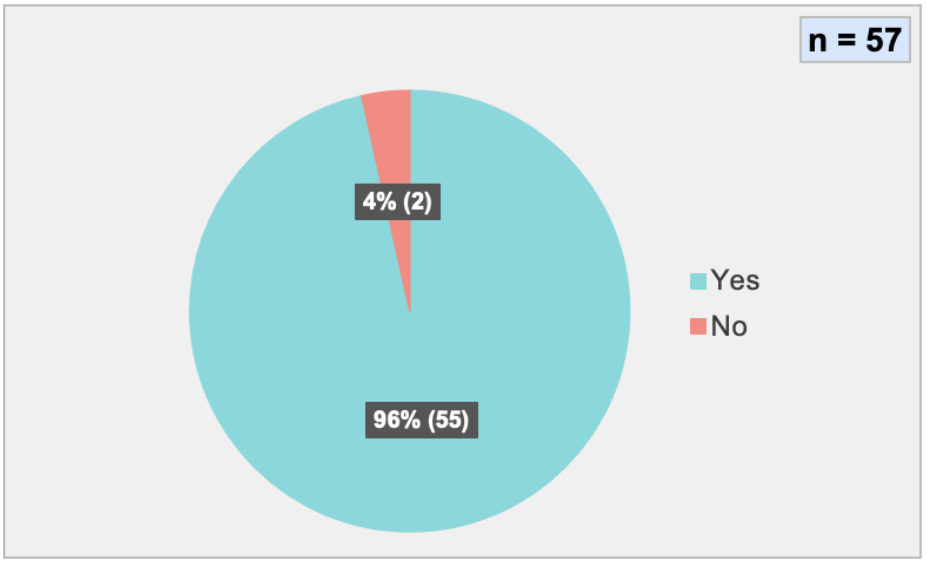


Figure A6:2: Parental perceptions of children's offline activities

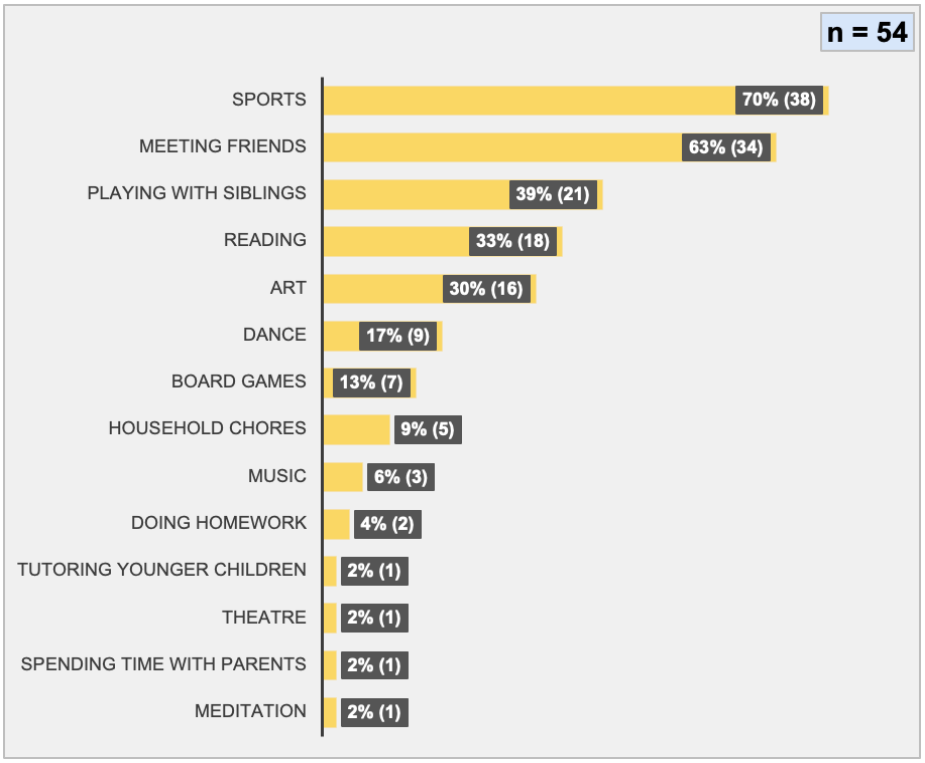


Figure A6:3: Parental perceptions of the quantum of time children spend on offline activities

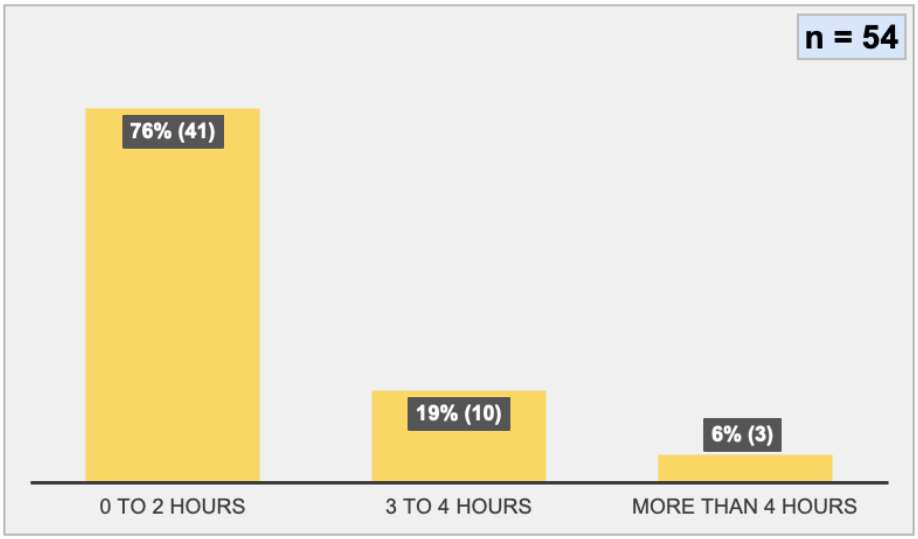


Figure A6:4: Parental perceptions of the quantum of time children spend online

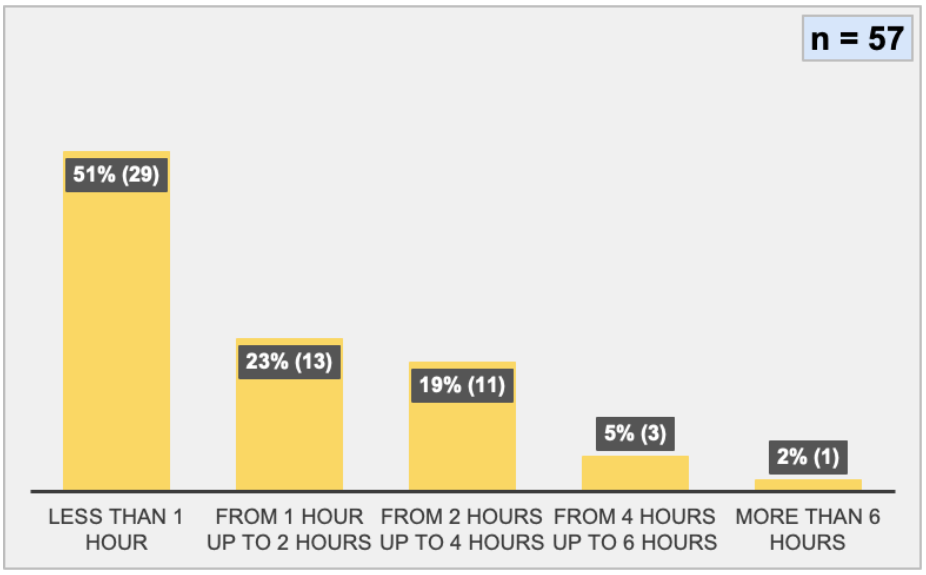


Table A6:1: A comparison of children and teacher perceptions on changes in time spent online across cohorts

Cohort	Student	Teacher
Cohort 1	From 5 to 30 minutes to a maximum of 2 hours per day	45 minutes to 4 hours
Cohort 2	From one second to five 5 hours per day (up to 8 hours on the weekend) One boy mentioned 24 hours, but this can be interpreted as very long hours	30 minutes to 4 hours
Cohort 3	From 45 minutes to 9 hours spent online per day (9 hours and sometimes more on the weekend)	30 minutes to 4 hours

Annexure 7: Parents' Perceptions of the Positive and Negative Impacts of Digital Engagement

Figure A7:1: Parents' perceptions of the impact of digital engagement on children

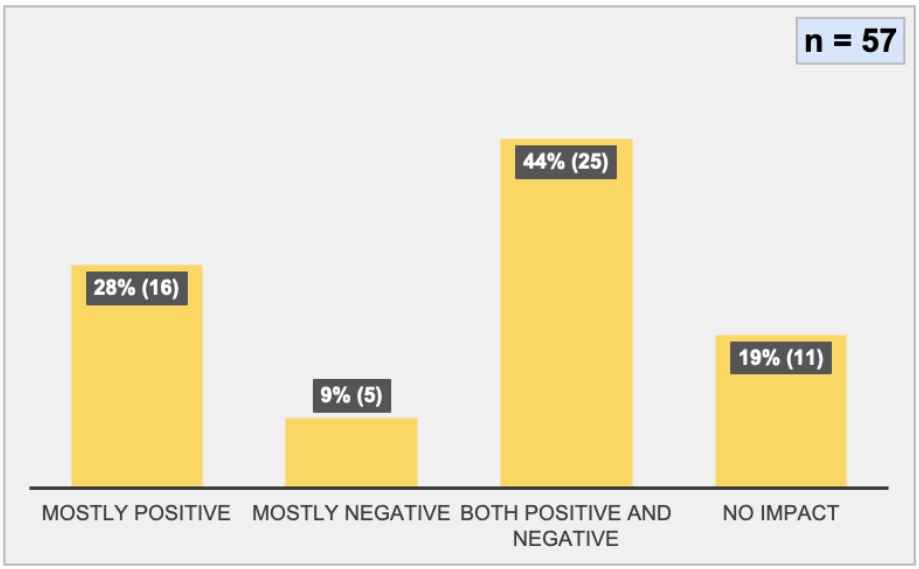


Figure A7:2: Parents' perceptions of the positive impacts of digital engagement on children

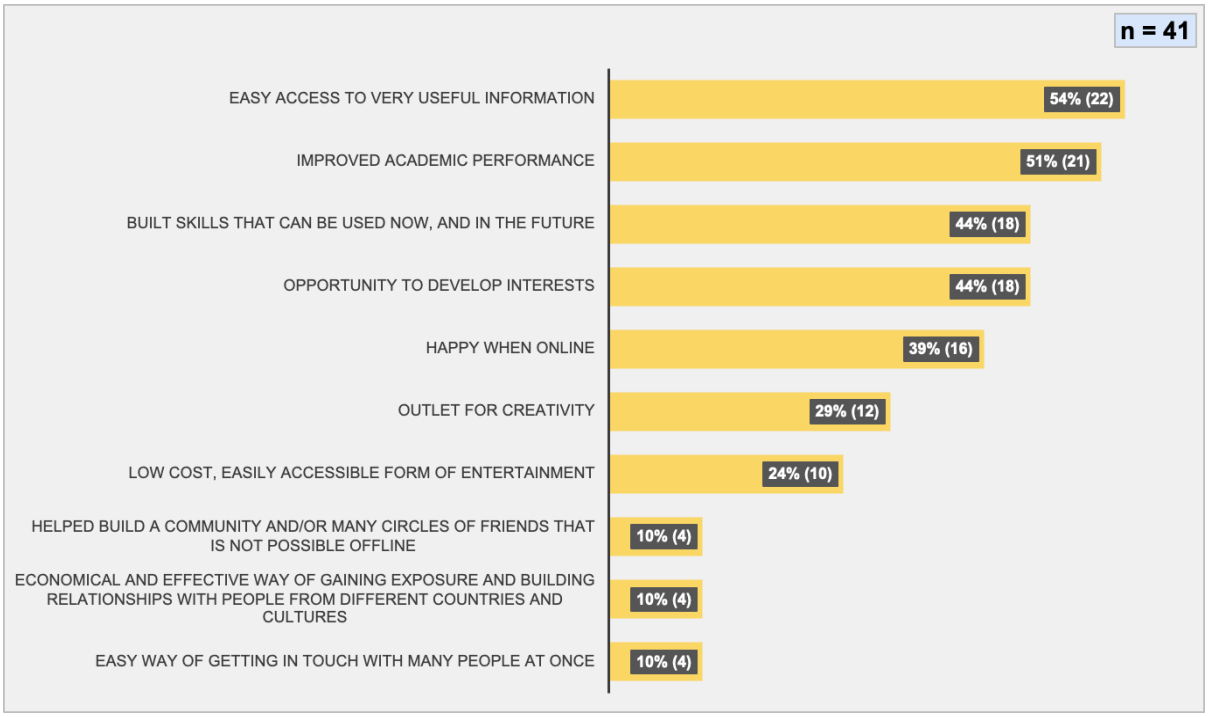


Figure A7:3: Parents' perceptions of the impacts of digital engagement on children with diverse needs

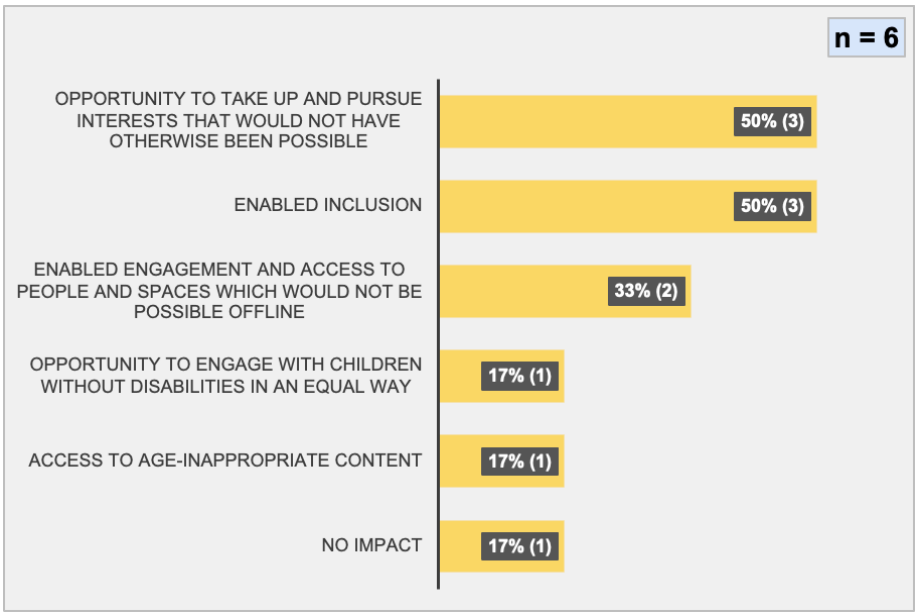
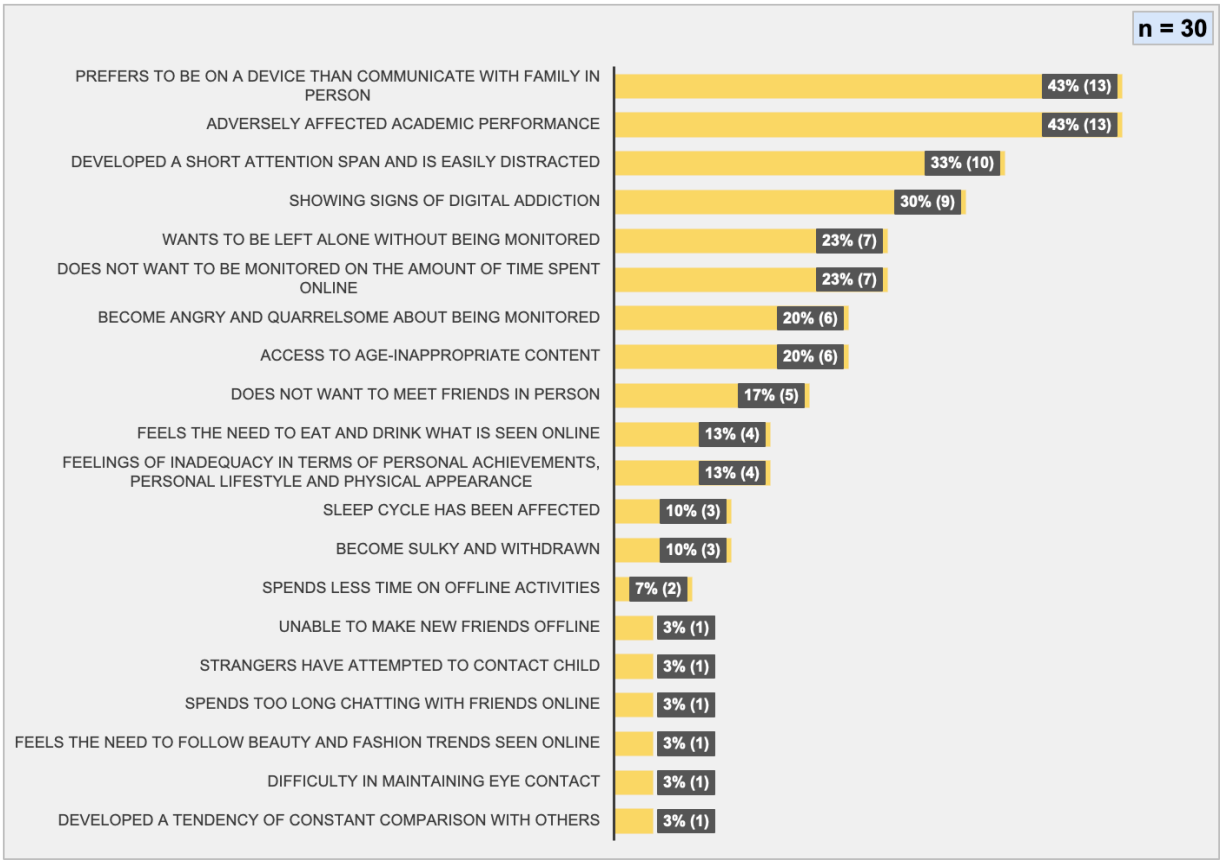


Figure A7:4: Parents' perceptions of the negative impacts of digital engagement on children



Annexure 8: Extent to which Parents Monitor Children's Digital Engagement and Need Inputs on Safe Digital Engagement

Figure A8:1: Extent to which parents monitor children's digital engagement

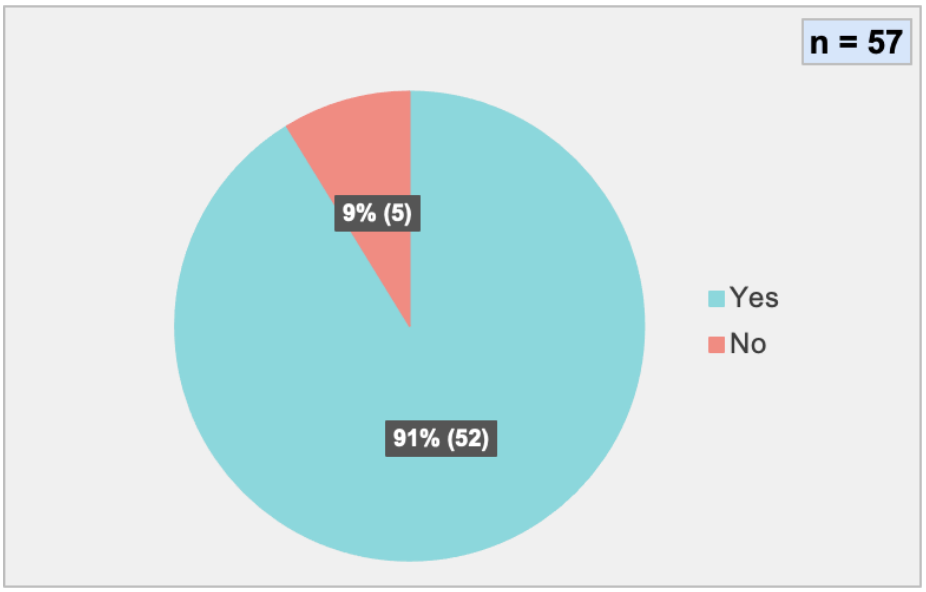


Figure A8:2: Percentage of parents who feel that they can be role models for children (in terms of digital engagement)

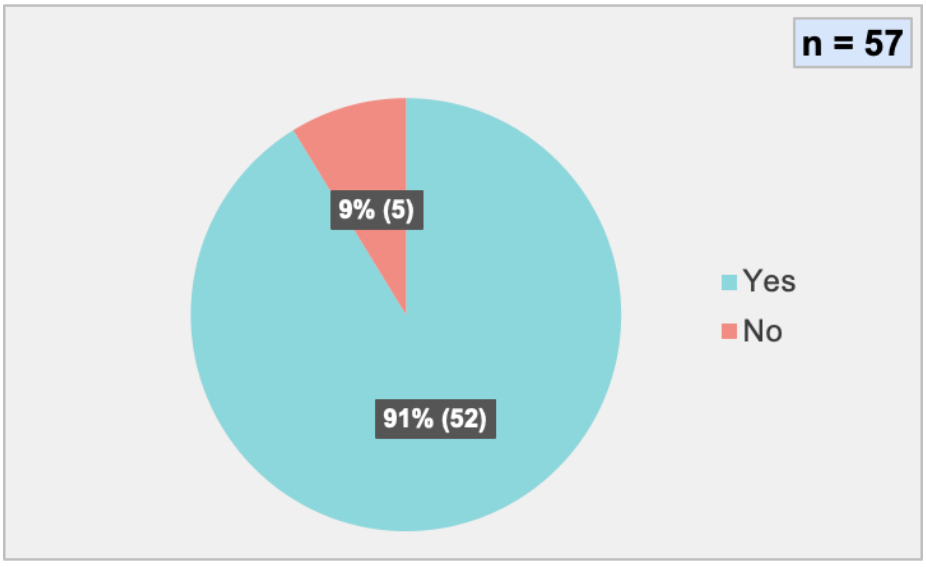


Figure A8:3: Percentage of parents who feel it is important to engage in shared online activities with children

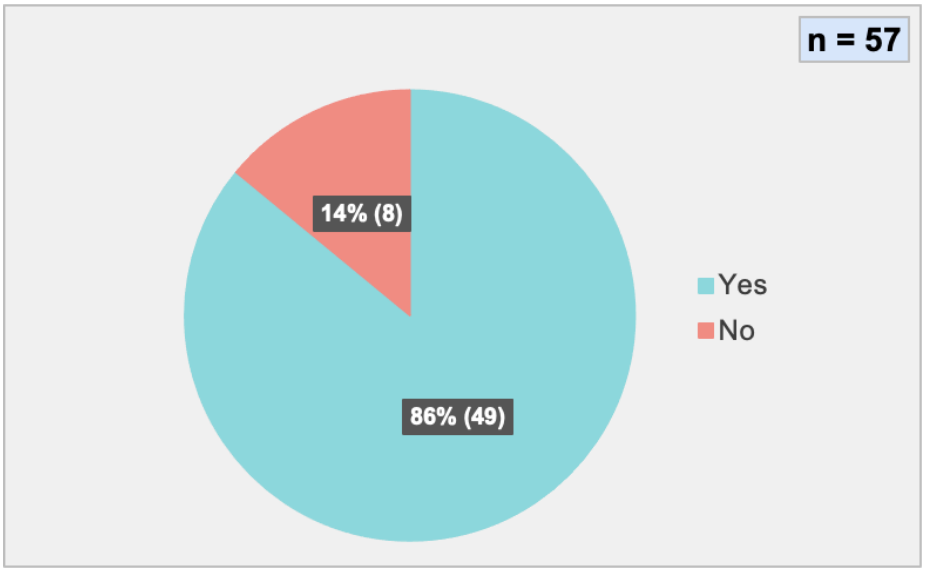


Figure A8:4: Percentage of parents who feel that they should be updated on the content consumed by children

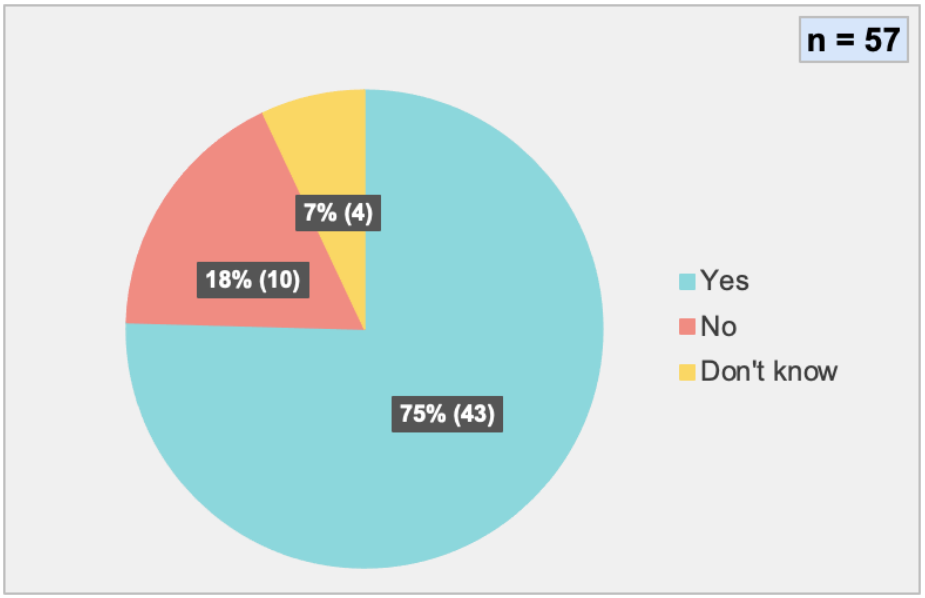


Figure A8:5: Percentage of parents who require inputs to create a safe online environment for children

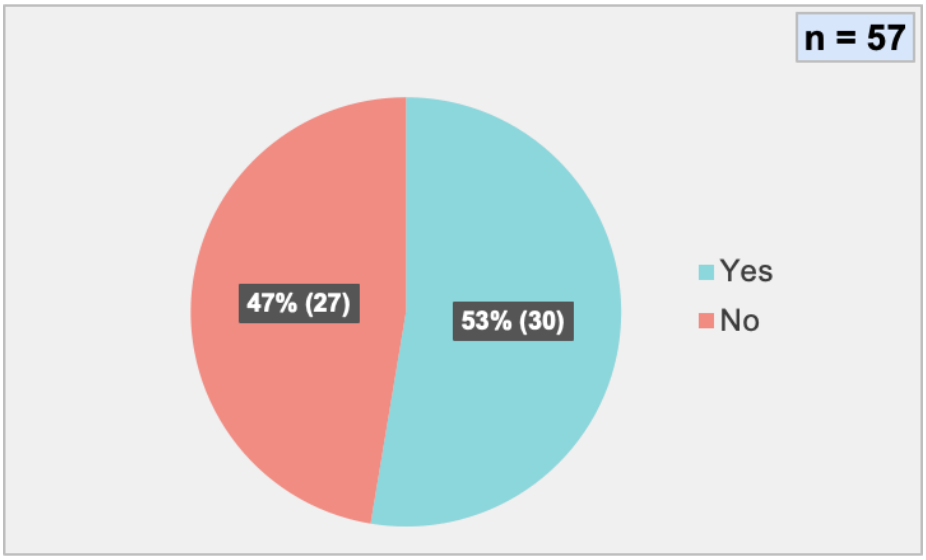


Figure A8:6: Percentage of parents who need expert help in building trust and communication with children

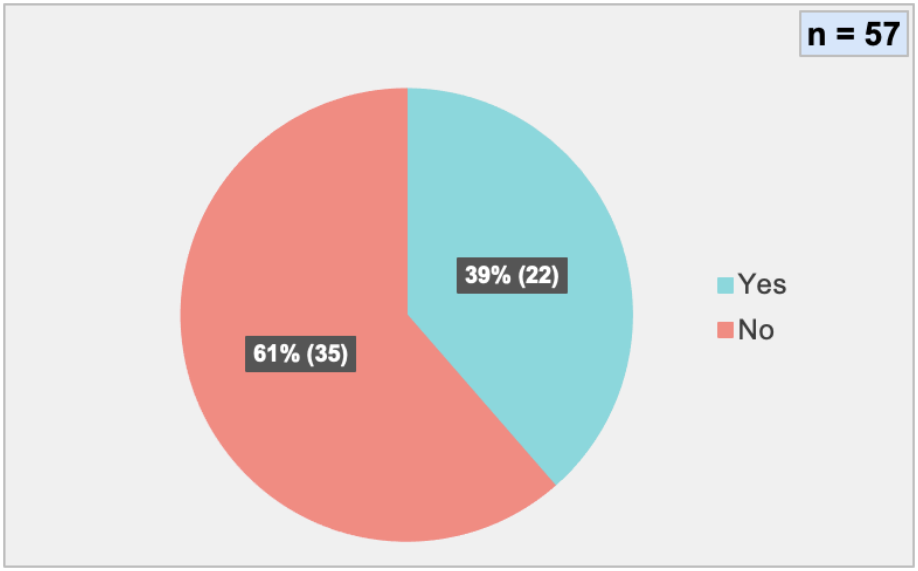


Figure A8:7: Percentage of parents who require expert help in enabling children to self-regulate their online engagement

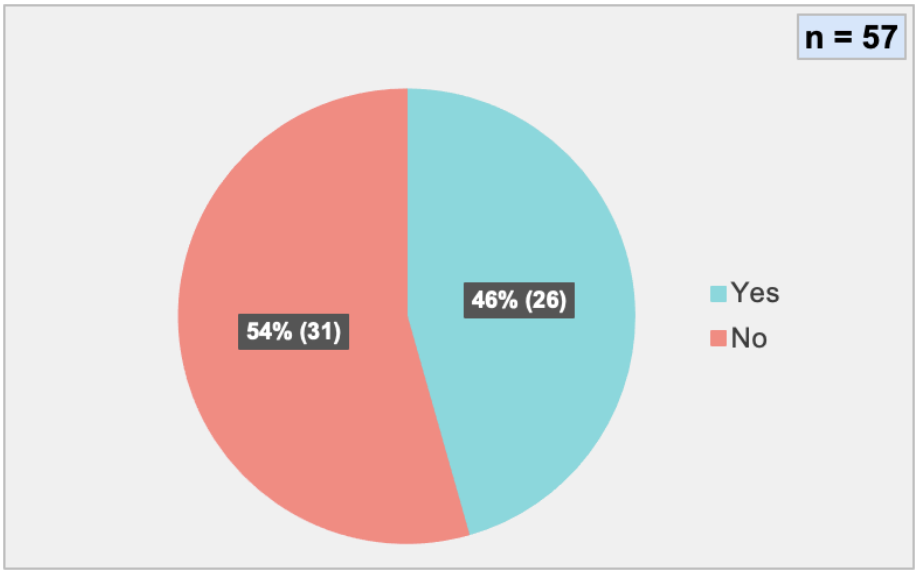


Figure A8:8: Percentage of parents who feel that children with physical and intellectual disabilities require different monitoring mechanisms

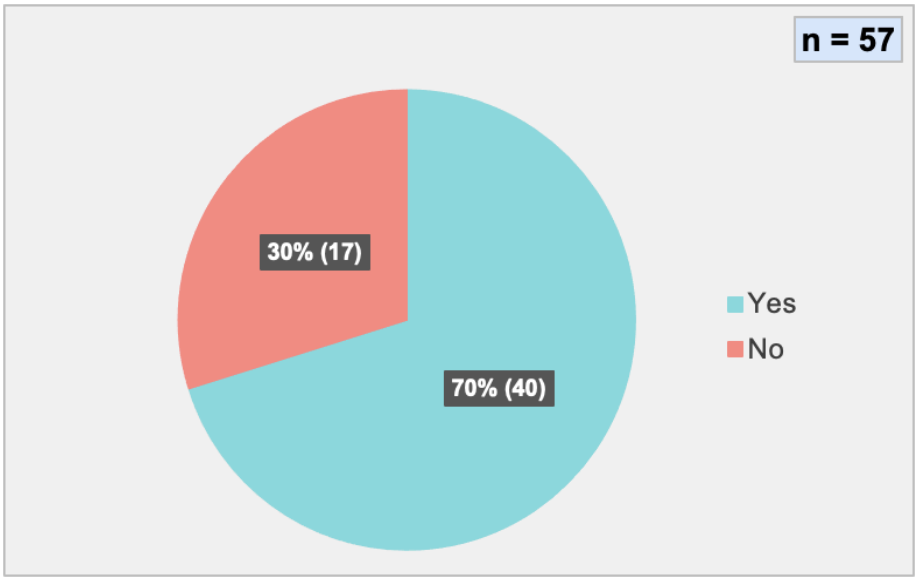


Figure A8:9: Percentage of parents who require expert inputs on monitoring children with physical and intellectual disabilities

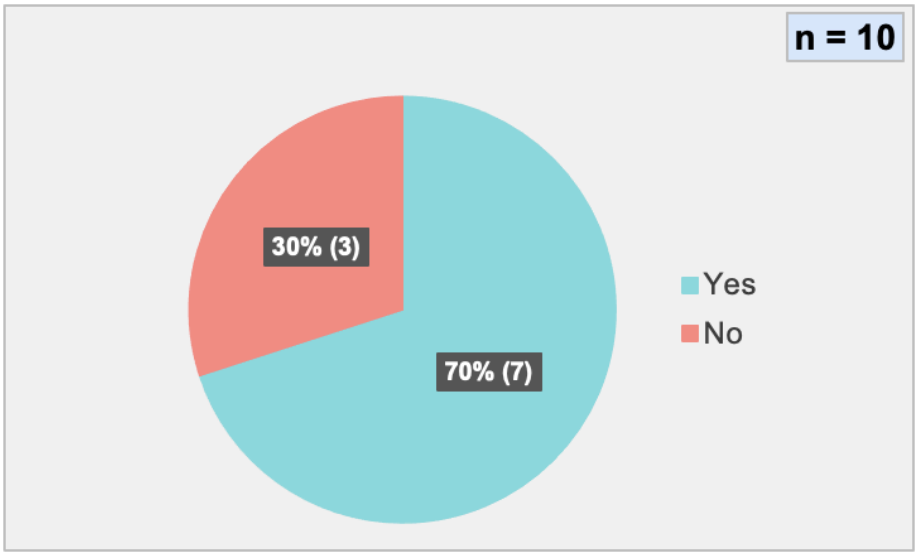
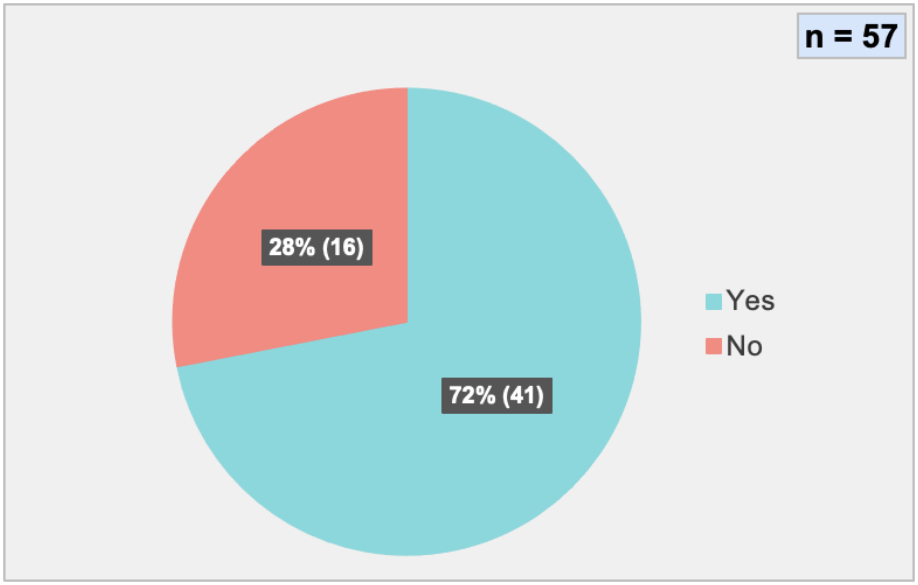


Figure A8:10: Percentage of parents who feel that schools should employ experts to create materials to help guide children's online behaviour



Annexure 9: Awareness and Views on Inputs on Safe Digital Engagement

Table A9:1: A comparison of children and teacher perceptions of the sources of online safety inputs for children in this study

S. No.	School	Cohort/ Group	Student perception	Teacher perception
1	Learning Centre for CWDN	Group 1	Parents	Teachers
		Group 2	Parents and teachers	Teachers
2	Rural Government School	Cohort 1	No inputs	External resource person
		Cohort 2	No inputs	No inputs
		Cohort 3	No inputs	Teachers
3	English Medium Urban Government School	Cohort 1	Teachers	Teachers
		Cohort 2	Police officer	Teachers
		Cohort 3	No inputs	Teachers
4	Kannada Medium Urban Government School	Cohort 1	No inputs	Teachers
		Cohort 2	No inputs	No inputs
		Cohort 3	External resource person	No inputs
5	Urban International School	Cohort 1	Teachers	Did not know
		Cohort 2	External resource person	Did not know
		Cohort 3	External resource person	School staff
6	Urban Private School	Cohort 1	Teachers	Teachers
		Cohort 2	Teachers	Teachers
		Cohort 3	External resource person and school counsellor	School staff (IT Department)

Figure A9:1: Parents' awareness of whether children have been exposed to inputs on safe online engagement

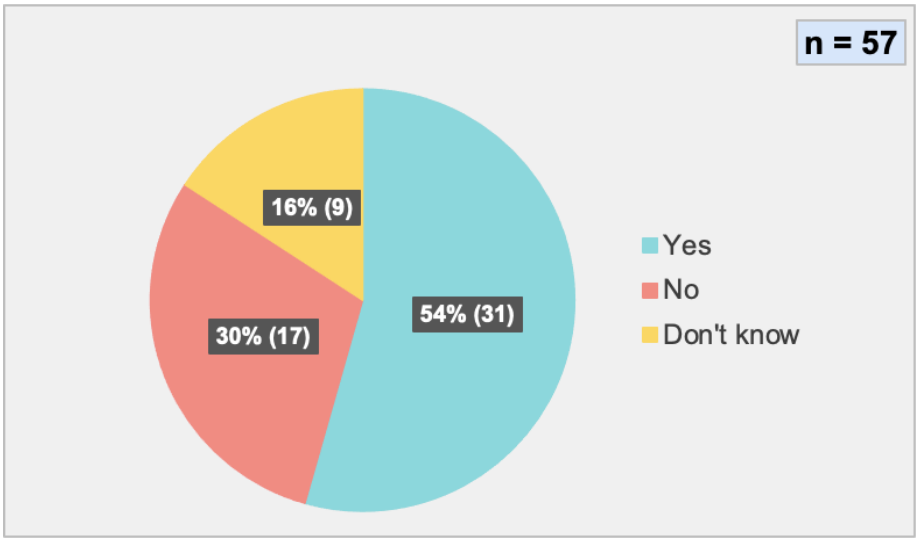


Figure A9:2: Parents' awareness of who gave children inputs on safe digital engagement

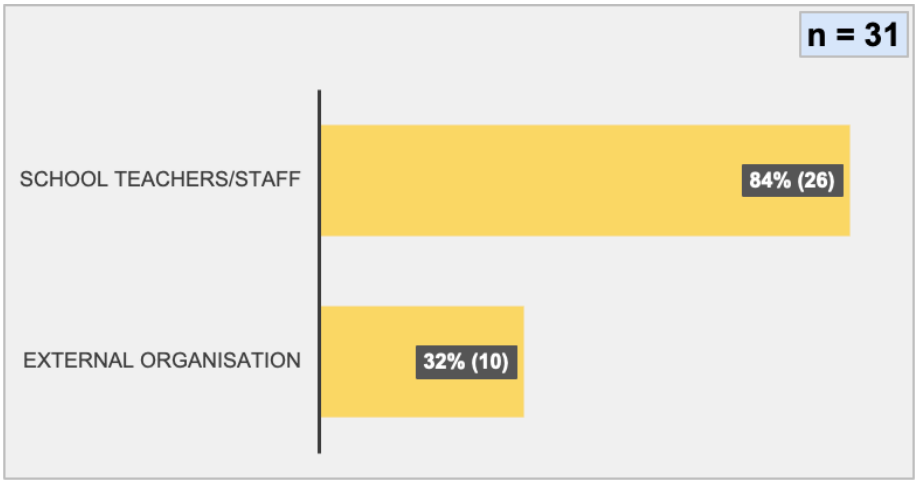


Figure A9:3: Percentage of parents who were aware of the topics covered in children's classes on safe digital engagement

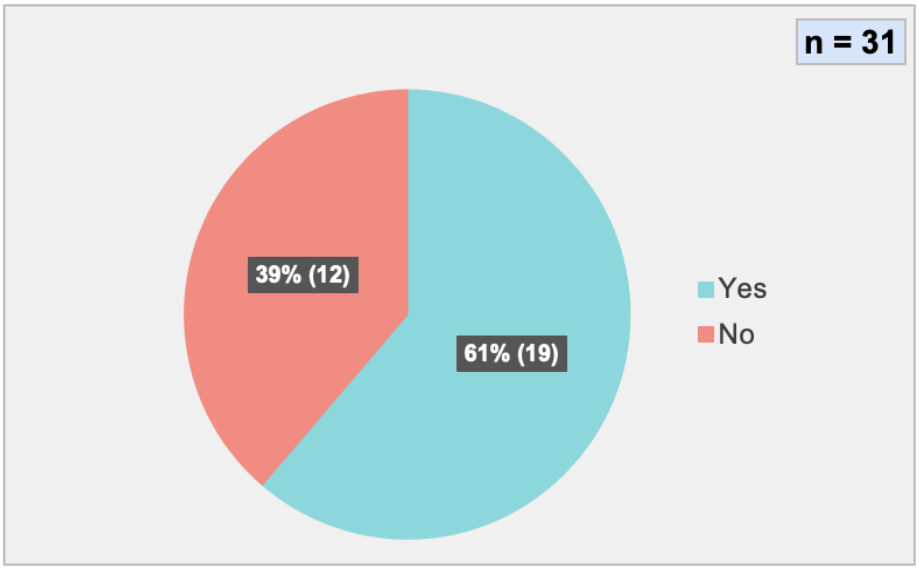


Figure A9:4: Parents' opinion of the utility of inputs on safe digital engagement that children received

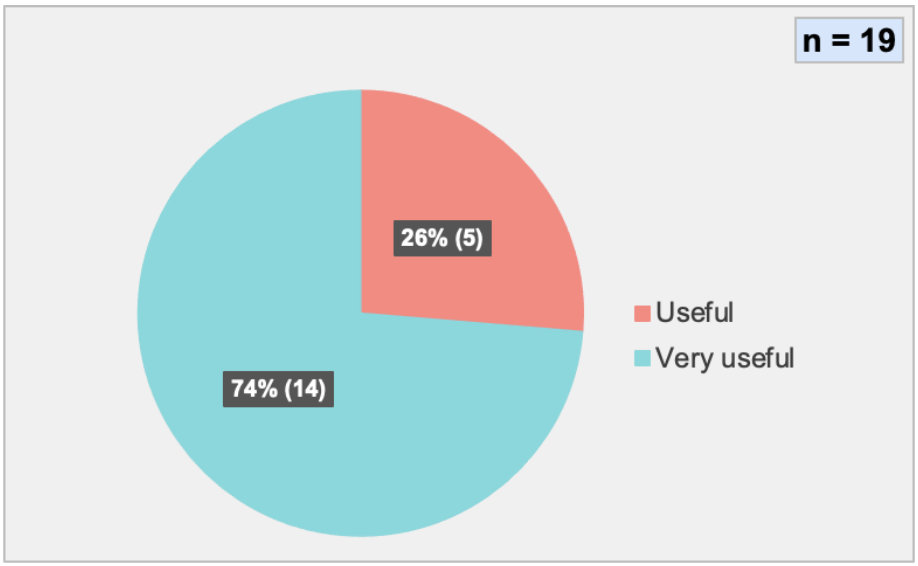


Figure A9:5: Parents' opinion of whether schools should conduct awareness programmes on digital safety for students and parents

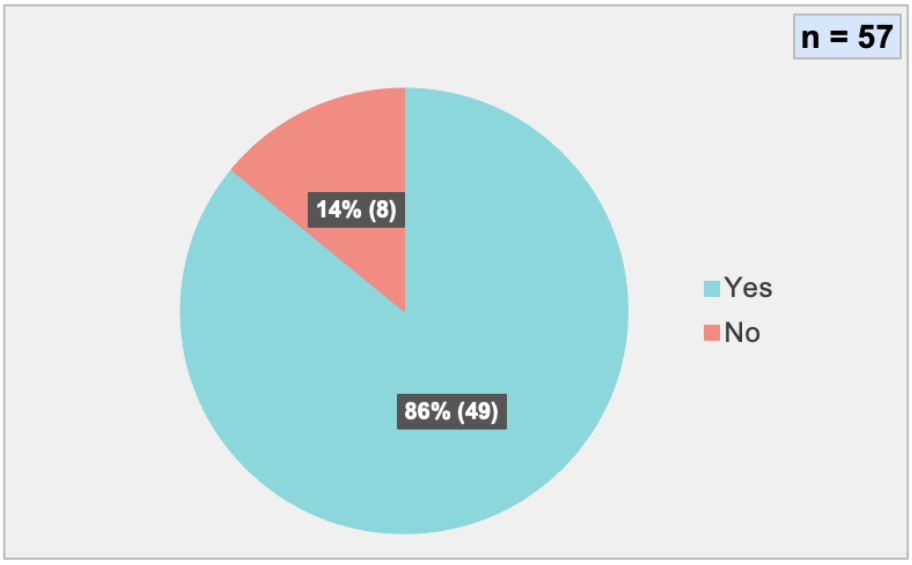


Figure A9:6: Parents' opinion of whether schools should set up counselling mechanisms for children dealing with online safety issues

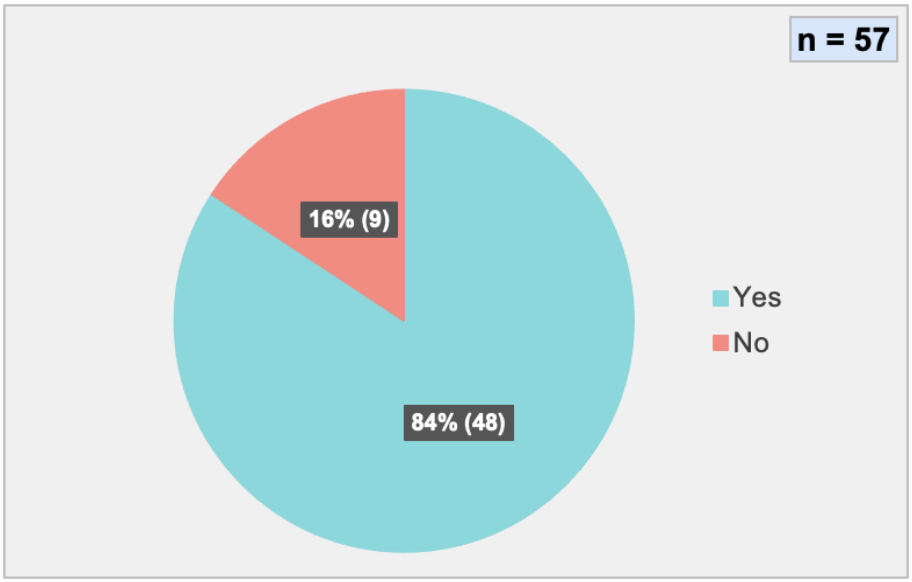


Figure A9:7: Parents' interest in joining a peer support group dealing with online safety and digital addiction

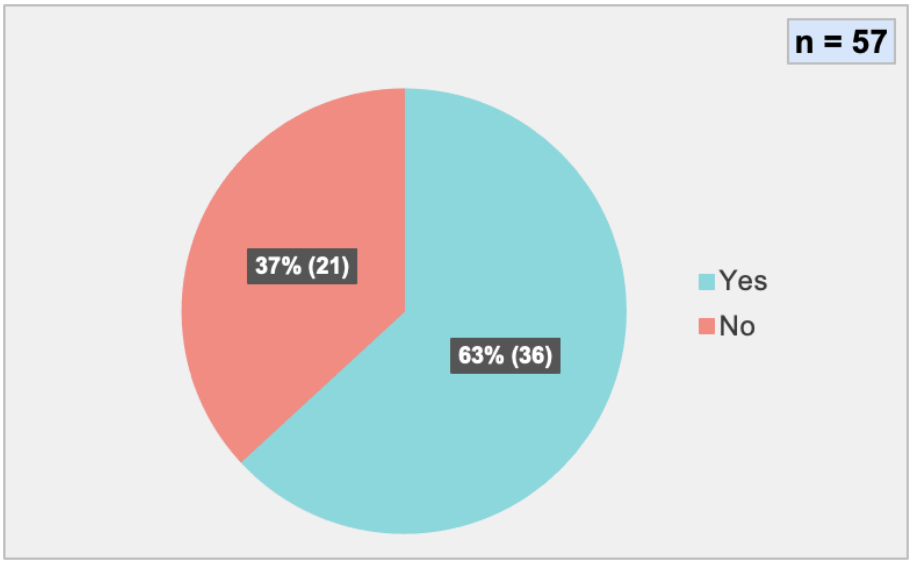


Figure A9:8: Percentage of parents who are aware of the signs of digital addiction

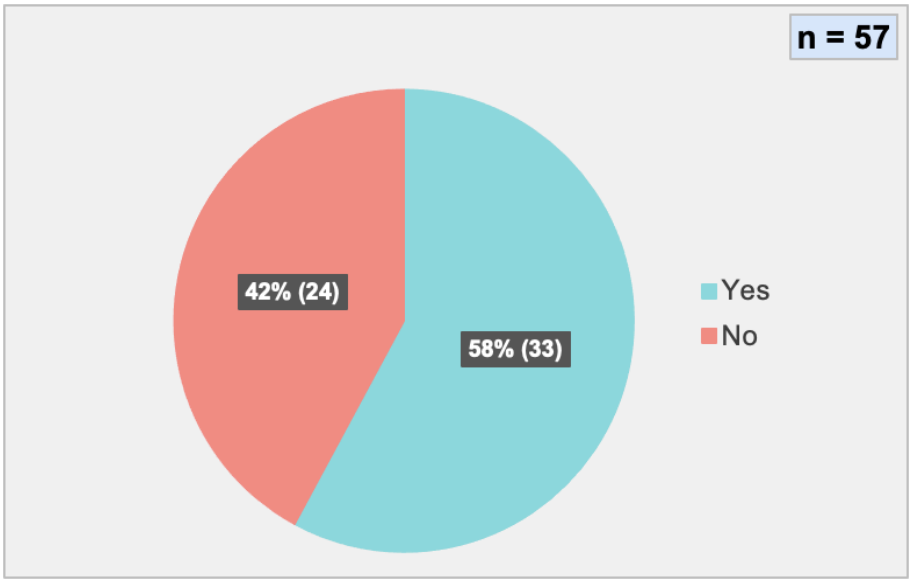


Figure A9:9: Percentage of parents interested in knowing of the signs of digital addiction

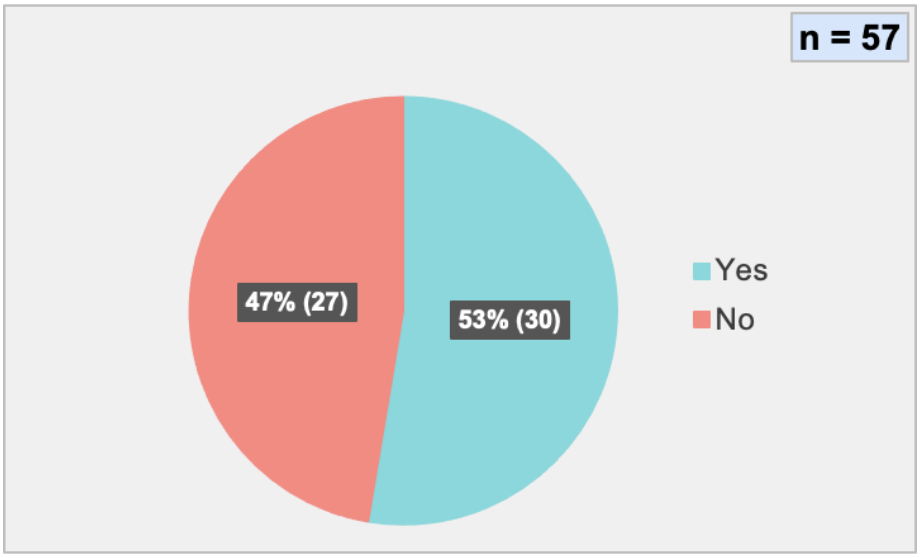


Figure A9:10: Percentage of parents who feel that a peer support and mentoring group for students should be initiated in school

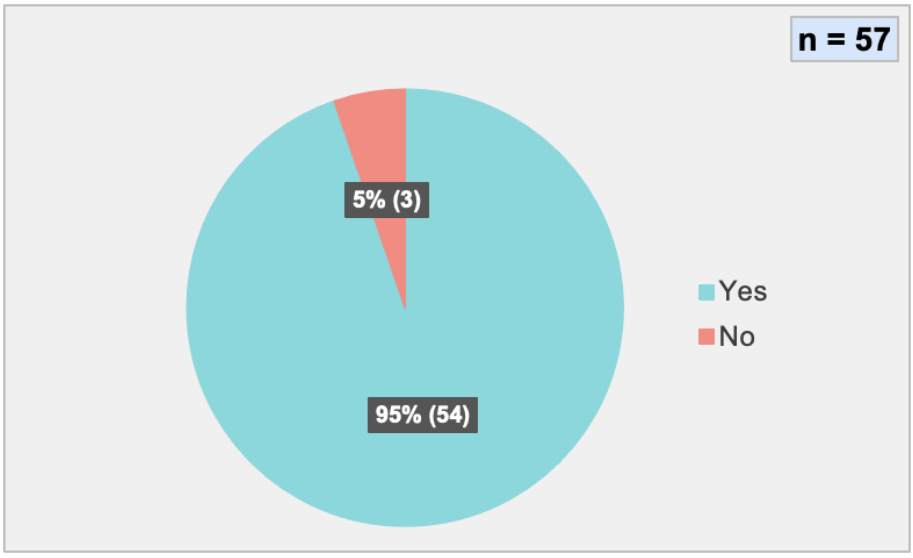
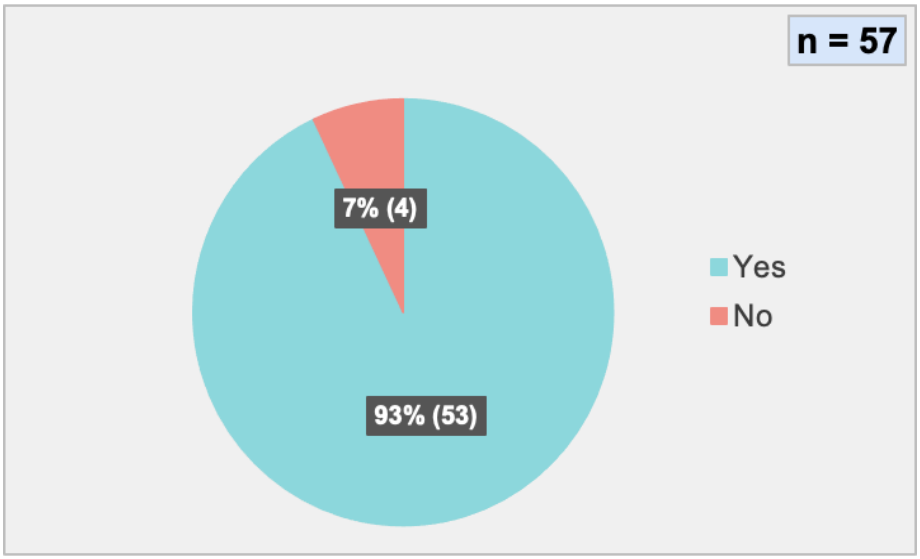


Figure A9:11: Parents' opinion of whether students should be involved in online safety awareness campaigns



Annexure 10: Parents' Responses on Laws and Policies on Safe Digital Engagement

Figure A10:1: Parents' awareness of laws and policies pertaining to safe digital engagement in children

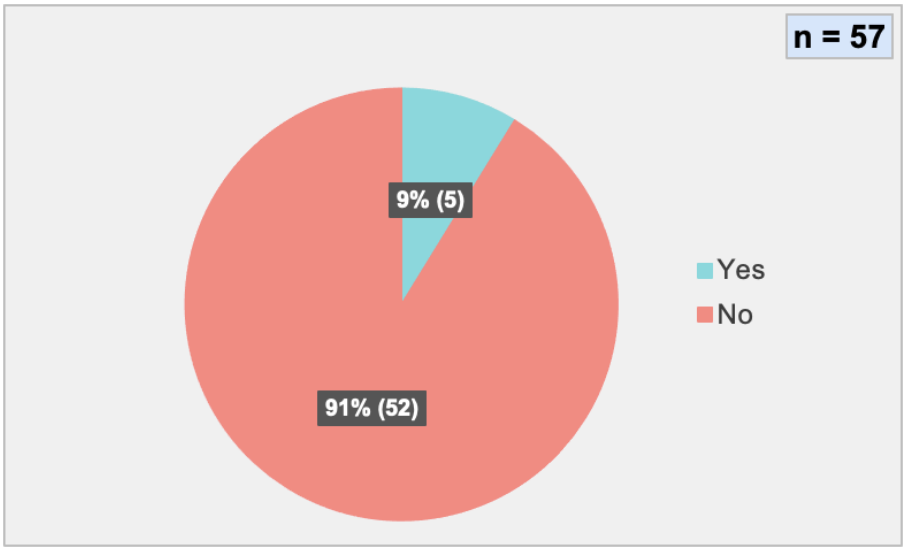


Figure A10:2: Percentage of parents who are interested in receiving information on the laws and policies pertaining to children's digital engagement

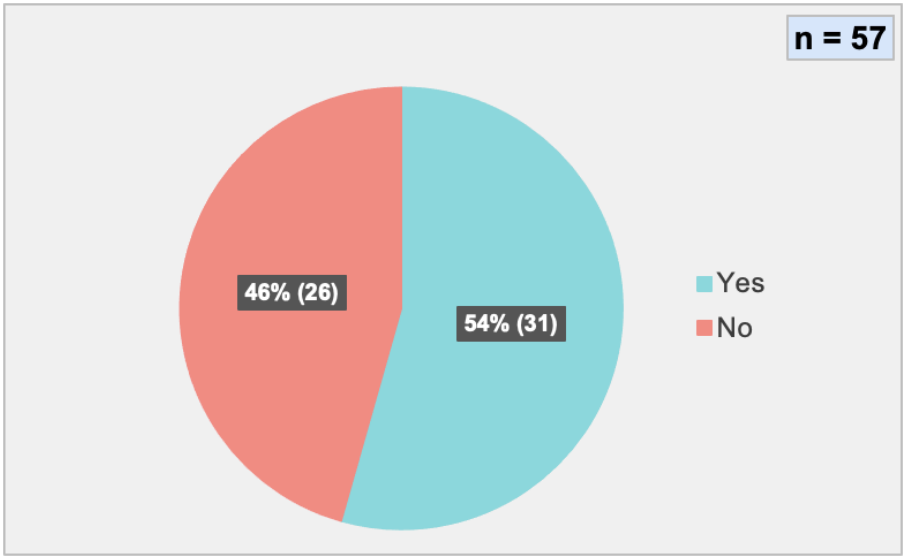
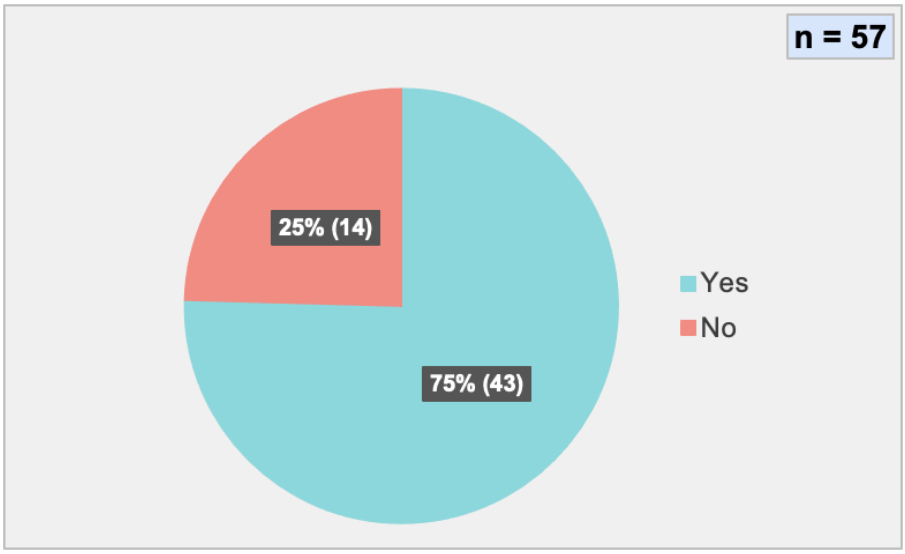


Figure A10:3: Percentage of parents who feel that different laws and policies on digital engagement should exist for children with disabilities



Annexure 11: Child-Friendly Indian Cyber Security Laws, Policies and Redressal Mechanisms

Legal Cyber Safety Framework in India

The Information Technology (IT) Act, 2000 [The IT Act]

The IT Act is the primary legislation governing the use of information technology and electronic communication. The Act covers a range of offences. Some relevant offences include:

- Section 67B: This provision criminalises the creation, publication, transmission, and even the downloading of any content that depicts children engaging in sexually explicit act or conduct. In addition, the provision punishes facilitating any online abuse of children, as well as conduct that amounts to cultivating, enticing, or inducing a child into an online relationship for a sexually explicit act.
- Section 66C criminalises identity theft.
- Section 66D criminalises impersonation by use of a computer.
- Section 66E criminalises the violation of privacy of an individual.

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

These are a set of rules that have been issued by the Ministry of Electronics and Technology, Government of India (MeitY). These rules imposed legal obligations on intermediaries and sought to regulate digital media platforms, social media platforms and over-the-top (OTT) platforms, all of which are referred to as intermediaries.[39] The Rules obligate intermediaries to take reasonable steps to address and protect its users from concerns arising from the use of their platform such as violation of privacy, obscene and pornographic material, information that is harmful to children, etc.[40] It is also the responsibility of the intermediary to use technology-based mechanisms to identify inappropriate content depicting rape or child sexual abuse.[41]

Protection of Children from Sexual Offences Act (POCSO), 2012

The Protection of Children from Sexual Offences Act, 2012 [The POCSO Act] is an exclusive law dealing with a range of sexual offences against children including offences relating to child pornography and online crimes against children. Some of the provisions relevant to online crimes against children include:

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[39] Section 2(w) of the IT Act, 2000 defines an 'intermediary' as "with respect to any particular electronic records, means any person who on behalf of another person receives, stores or transmits that record or provides any service with respect to that record and includes telecom service providers, network service providers, internet service providers, web-hosting service providers, search engines, online payment sites, online-auction sites, online market places and cyber cafes."

[40] Rule 3(b), *Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021*

[41] Rule 4(4), *Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021*

- Section 11 (sexual harassment): While the provisions deals with a range of non touch-based acts that amount to sexual harassment of a child. In specific the provisions criminalise the acts of:
    - showing any pornographic material to a child;
    - stalking of a child including online stalking; and
    - threatening to use real or fabricated media of the child engaged in a sexual act
- Enticing a child for pornographic purposes or giving gratification for such purposes.
- Sections 13 and 14 deal with using a child for pornographic purposes.
- Section 15 criminalises the storage of pornographic material involving the child in order to share or transmit the material.

Digital Personal Data Protection (DPDP) Act, 2023

The Digital Data Protection Act serves to protect and maintain the privacy of an individual's private data. The Act in Section 9 specifically recognises the rights of children to their personal data and prohibits the processing of any personal data of children without the consent of the parent or lawful guardian. In addition, the provision prohibits the processing of any information that is detrimental to children, the tracking or behavioural monitoring of children, and advertisements targeted towards children.

Redressal Mechanisms in Case of a Cyber Crime

Besides reporting cyber crimes on the respective social media platforms, children can also use the following redressal mechanisms (Nagarathna et al., 2020; Cyber Peace Foundation, 2019; Iyer & Singhal, 2023):

- The Cybercrime Prevention against Women and Children (CCPWC) scheme has been approved by the Ministry of Home Affairs, Government of India. This scheme allows the reporting of a cybercrime through an online portal (www.cybercrime.gov.in).
- Filing an FIR with the local police or Cyber Crime Police Station.
- Dialling 1930, which is the national cyber crime helpline number.
- Dialling CHILDLINE 1098, which is a 24-hour emergency helpline for children.
- A POCSO complaint can be filed to the POCSO e-box (https://pocso.ncpcrweb.in/).
- E-Baal Nidan (https://ncpcr.gov.in/ebaalnidan/) is an online portal launched by the National Commissions for Protection of Child Rights (NCPCR), on which children can report a case of violation of their rights.
- Internet Hotline managed by Aarambh in partnership with the Internet Watch Foundation (https://aarambhindia.org/report/)

According to S. Sukumaran (personal communication, April 24, 2024), such redressal mechanisms are beneficial for children, but there is limited awareness around them, which may be even less amongst children in rural settings. To enhance the awareness of cyber

crime-related redressal mechanisms, the Government can conduct awareness programmes for children based in a rural setting, and also train accredited social health activist (ASHA) workers and Anganwadi workers to pass on these resources to children. The use of media, television, radio and pamphlets may be beneficial as well. Attempts to spread awareness are most effective when such initiatives are taken up by the Government.

Indian Policies Including Cyber Safety

National Child Protection Policy

The National Child Protection Policy has been drafted by the Ministry of Women and Child Development, Government of India (2018). According to it, each organisation or institution should have a child protection policy in place. It should be drafted keeping in mind the best interests and safety of the child. With regards to online safety, the national policy states that:

- The employees of an organisation or institution should report cases of online abuse to CHILDLINE 1098, the police, or the Child Welfare Committee.
- Institutions and organisations working directly with children must educate children on child abuse, online safety, and related resources.

The National Child Protection Policy is a draft guideline that is recommended to be followed by the states of India. Karnataka and Madhya Pradesh have drafted their own Child Protection Policy, which would apply to all institutions and organisations directly or indirectly coming in contact with children.

Initiatives by the Government of India to Promote Online Safety of Children

- *Draft Guidelines on Cyber Safety by the NCPCR*
  The NCPCR has released a set of draft guidelines, highlighting the importance of cyber safety and cyber safety education for school children. Additionally, it includes a cyber safety checklist, which can be utilised by schools, to take measures to promote online safety in school (https://ncpcr.gov.in/uploads/16613369326305fd6444e1b_cyber-safety-guidline.pdf).
- *Cyber Safety Resource Materials by the Central Board of Secondary Education (CBSE)*
  These resources have been released by CBSE in collaboration with Cyber Peace Foundation. They contain information on digital literacy, digital safety and digital rights, presented in a child-friendly and interactive manner (https://cbseacademic.nic.in/web_material/Manuals/Cyber_Safety_Manual.pdf).
- More resources on cyber safety for parents, teachers and children can be found in English and Hindi, on https://ciet.ncert.gov.in/cyber-safety-security.

- *Guidelines of School Safety by the Ministry of Education, Government of India (2021)* Section 5.11 elaborates on the steps to be taken by schools to ensure the digital safety and digital literacy of their students.

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About The Fund for Global Human Rights

The Fund for Global Human Rights equips grassroots activists across the globe with the financial and strategic support they need to improve lives, mobilise movements, and build a better future for their communities. Since 2002, the Fund has raised and invested over $100 million into the work of community activists in more than 25 countries, providing these bold local leaders with the funding, tools, and contacts they need to tackle some of the world's greatest challenges. As a result, millions of people worldwide now have access to basic resources and opportunities to participate fully and equally in society.

About Enfold Proactive Health Trust

Founded in 2002, Enfold Proactive Health Trust addresses gender-based violence and sexual abuse. Its Prevention Team conducts Gender Equity, Sexuality & Personal Safety Education for children, including children with disabilities, college students and adult stakeholders. The Support and Rehabilitation Team assists children who have faced sexual violence through the criminal justice system and conducts training on the POCSO Act, workplace sexual harassment and redressal mechanisms. The Restorative Practices Team facilitates Circles and trains Child Care Institution staff, school teachers, counsellors, and social workers in building a restorative culture and addressing conflict through Restorative Practices. The Research Team works on issues of child protection to advance children's rights and implementation of laws.

This report presents a child-centric gaze on the phenomenon of digital engagement. It accesses the perspectives of adolescents from varying backgrounds: those studying in urban private schools; urban international schools; urban and rural government schools; and children with diverse needs. It also brings in the opinions of their parents and teachers to explore the extent of coherence and dissonance between these three key stakeholders.

The study details the different aspects of this phenomenon: the age of engagement with the digital world; the nature of engagement; its impact; the varying monitoring approaches; and stakeholder knowledge around laws and policies pertaining to cyber safety. It makes a series of recommendations to maximise the positive effects and mitigate the negative impacts of this engagement to promote healthy and responsible online interaction.