

Classroom Learning Vs. Digital Learning In Indian Primary Education

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ARTICLE INFO

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in

Assistant Professor,
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Dates:

Received: 22-04-2026

Accepted: 25-05-2026

Published: 30-06-2026

Keywords:

Classroom, Digital,
Primary, Education,
Learning

How to Cite:

Chopra AB, Sharan
S. (2026) Classroom
Learning Vs. Digital
Learning In Indian
Primary Education.

MediaSpace:
DME Journal of
Communication, 7(1), 98-105.
doi: 10.53361/dmejc.
v7i01.09

Abstract

This Paper Examines that how a child is being shaped through the various modes of Learning, Like- Classroom learning and Digital learning. The education system in India has mainly relied on classroom learning, where students learn from teachers and interact with classmates. However, with better internet and digital technology, online learning has become an important option. Some Scholars brings out other side of it as a challenge like lack of internet access for some students, less practical learning, and reduced social interaction. This shift increased during the COVID-19 pandemic, when schools moved to online classes. Since then, online learning has become common because it is flexible and easy to access. (Shushant Yadav and Sanjay Kumar Singh, 2025)

Using a mixed-methods research design the study combines qualitative interviews with principals, heads of departments, and primary teachers; parent surveys administered via online forms; and focus-group discussions and participant observation with primary students. Narrative analysis and coding of interview, survey, and observational data are supported by basic quantitative techniques using tools such as Likert-type scales, Excel, and Google Sheets. The sample includes approximately 12–15 teacher interviews, 90–100 parental survey responses, 40–45 student focus-group responses, and 7–8 prior case studies to situate findings within existing relationship on classroom versus digital learning. This Paper looks at both the aspects of the learning equally to find out which mode of learning is best suited for primary education children.

INTRODUCTION

Education has always been a source of confidence, awareness, knowledge, values and wisdom. It brings about change in one's mind and gives variety of perspective to think about and decide the best suited way of development.

Primary education is especially important because it teaches children how to become responsible individuals and prepares them for a better future. It gives them the basic knowledge and life skills needed to succeed and improve their lives.

India has always been a land of knowledge served through Books, Vedas, Written accounts, Manuscripts. The Concept of Gurukuls has always been in

MediaSpace:

DME Journal of Communication

e-ISSN: 2583-035X

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our Culture and Guru-Shishya relationship has been an equation of learning- Moral values, religious growth, Traditional practices, Culture, Life lesson and relationships. The one-to-one interaction during this time has brought more growth and satisfaction to this equation and students felt a sense of association and felt connected with their Gurus in all phases of life. Classroom learning has been a trademark of Indian education system, where daily interactions rejuvenate the relation and endows with more clarity, transparency and trust and confidence to an individual as they can feel that they are on the right tracks and their growth are visible and the Guru is leading them to the right track.

Primary education is very important because it helps children learn basic reading, writing, and math skills that are needed for all future learning. It also supports their thinking, social skills, emotions, and physical growth. At this stage, children learn good habits, develop values like honesty and respect, and become more confident and responsible. It builds a strong base for learning and overall development.

Children in Primary classes are open for new and very raw learnings which lead them to learn very basic and grow into ambitious and independent and positive individuals, who adds more into nation building and moreover makes them an accountable citizen.

Technological advancements have paved path for more developments and digital spheres in almost every branch of the human life. Education is one such field where digital tools has transformed the mode of education that ever and earlier existed. Digital learning is the latest mode of learning preferred by every student as it is easier, cheaper and anywhere and anytime accessible.

The Pre-existed Classroom learning is now a concept taught to today's generation and are told that it was more friendly and easy way to interact with the teacher and create a bond between them. Not only this, teacher would also give them life lessons and morals directly or indirectly through stories or narratives and would aware them about the complexities of life.

Latest by News, COVID-19 was a game changer as it even made the primary school children to learn via mobile phones and attend online classes and

digital home works. The life of children was more onto webs and device oriented rather than through books and copies. What was initially meant to be a simple temporary measure ended up being one of the pillars of the contemporary education system, as quoted by (Yadav & Kumar,2025).

Considering the various prospects of Classroom learning and digital learning, this study aims at knowing, what was the existed study (Previous researches) say about these modes and what today's generation prefers.

REVIEW OF LITERATURE

This study has various prospects to cater and bring about the variety of considerations.

The relevant theories that can be considered with this study are - Sonia Livingstone's Media literacy theory, which simply points out that media literacy is becoming both more important and more complex in the age of digital and interactive technologies, and that It proposes that media literacy must be understood as a historically and culturally shaped relationship between texts and technologies, individual competencies, and institutional power, rather than just a set of neutral abilities individuals acquire

Livingstone reviews the standard definition of media literacy as the ability to access, analyse, evaluate, and create messages across different media, and accepts these as necessary but not sufficient components.

She also suggests thinking in terms of "literacies" in the plural, emphasizing that literate practices are co-produced by users and specific media forms, so the shift from page to screen can alter how people read, learn, and relate to authority.

Not only this theory, Schema theory also plays a very important role while studying this research as it lays out the basic of children's mind and their images and brain developments.

Along with, Social Construction theory suggests that much of what we consider reality, such as norms, values, concepts, and knowledge, is not fixed or universal but is instead flexible and constructed dynamically by society. This means that social realities arise from collaborative consensus and are



maintained through social processes, negotiations, and experiences.

Technological determinism theory says that technology acts as the primary driver of social change, shaping a society's culture, economy, politics, and structure independently of human agency or social context.

In nutshell, it's important to understand these theories as these can help to understand the children's perception well.

According to reports published by KPMG and Google (2023), the growth of smartphone penetration in even the backward regions and the low cost of the internet has increased access to digital education significantly. In a similar fashion, such government programs as SWAYAM, DIKSHA, and PM e-Vidya have reinforced massive online education systems (Ministry of Education, 2022).

According to Azim Premji Foundation (2021), the learning loss during the pandemic is also significant, and the role of teacher support, peer communication, practical learning and classroom setting are especially important.

Across the literature, digital modes are linked with gains in flexibility, multimedia explanation, and personalized access, while classroom settings remain stronger for social interaction, discipline, experiential learning, and reliable assessment for younger children (Yadav and Kumar, 2025).

Teachers reported that blended learning could improve concept explanation through audio-video materials, increase interest and curiosity, and support multiple modes of teaching and assessment. At the same time, teachers judged face-to-face assessment as more effective than online assessment, and they emphasized problems such as weak discipline, parental interference, device scarcity, network issues, and the loss of classroom climate and experiential activities (Oza and Trivedi, 2021).

As Kline and Walters (2016) show, effect sizes are highly sensitive to a child's counterfactual activities. Since these counterfactuals vary substantially across contexts, treatment effects from expanding pre-primary enrollment are likely to differ as well.

For instance, relative to a U.S. child, a child in rural India is far less likely to have access to children's

books or educational materials at home but may have more frequent peer interactions via Anganwadi centers. Moreover, programs in developing countries frequently face implementation hurdles, leading to systematic differences in school quality. Lastly, the long-term persistence of these effects into primary school hinges on whether underprepared entrants receive targeted support to catch up (Kline & Walters, 2016).

A study by (K. Aarush and K. Aditya, 2019) reveals Tech contributes for different subjects, differently. Also, the textbooks and lectures may not be able to help children depending upon their speed of learning. While on the other side different software would help them learn in a more promising and potentially a better one. Digital learning groups shows about 17% of growth while Traditional group shows 6% only. He adds, Apps involves immediate feedback and real time connections whereas Books restrict exploration and understanding to a certain extent, and further they add in Digital learning has more fear of loss of time.

A study by (Stephanie M. Reich, 2019) compares how 3 to 5 year-old, children comprehend stories, learn vocabulary, and engage when read the same book either by an adult from print or via auto-narration on an iPad, brings about facts like prior research shows shared print reading boosts vocabulary and comprehension, but e-book studies yield mixed results, especially for preschoolers using tablets without adult interaction.

Children scored slightly higher on comprehension and recall (especially story sequence) with print books, while older children and girls outperformed others. Engagement was equal across conditions for attention and emotions, but e-book users made more device-related comments. Frequent tablet users benefited more from print, while infrequent users did better with e-books.

OBJECTIVES

For the above research to be carried out, the working objectives will be as mentioned -

- To make an in-depth study about Children's choices and Interest in Digital Times.
- To instigate the Teacher's Perspective and tools

they use to teach the Primary Classes.

- To explore Children's Emotional and Traditional Growth Via Textbooks.

METHODOLOGY

Children form the central focus of this study, and their choices, preferences, and behaviours must be treated as critically important to the research aims. The way children act, respond, and decide will serve as a fundamental basis for the conclusions and insights drawn from this work.

In this research, children are not merely participants but the primary foundation upon which the entire investigation rests. Their perspectives need to be understood carefully, because these views will significantly shape how educational practices and policies are interpreted and improved. Children's behaviour, interests, and decision-making patterns therefore require close attention, as they will guide both the design of data collection instruments and the eventual analysis of results. To address the complexity of the topic, this study

adopts a multi-faceted approach that includes parents, classroom teachers, school principals, heads of departments, and syllabus or curriculum developers. Each of these stakeholders offers a distinct perspective, and their input is vital for understanding how children's experiences are shaped within the wider educational environment.

The views and concerns of these adults carry considerable weight, as they are responsible for implementing and overseeing educational practices that affect children daily. Their opinions can highlight systemic strengths and weaknesses and thus contribute to more informed and balanced conclusions.

The study will rely on both qualitative and quantitative methodologies, drawing on the strengths of each approach to gain a more complete picture of children's experiences and stakeholder perspectives.

In order to study and understand the different particulars of this study, a Mixed Method would be an exact choice for the topic, which are as follows; -

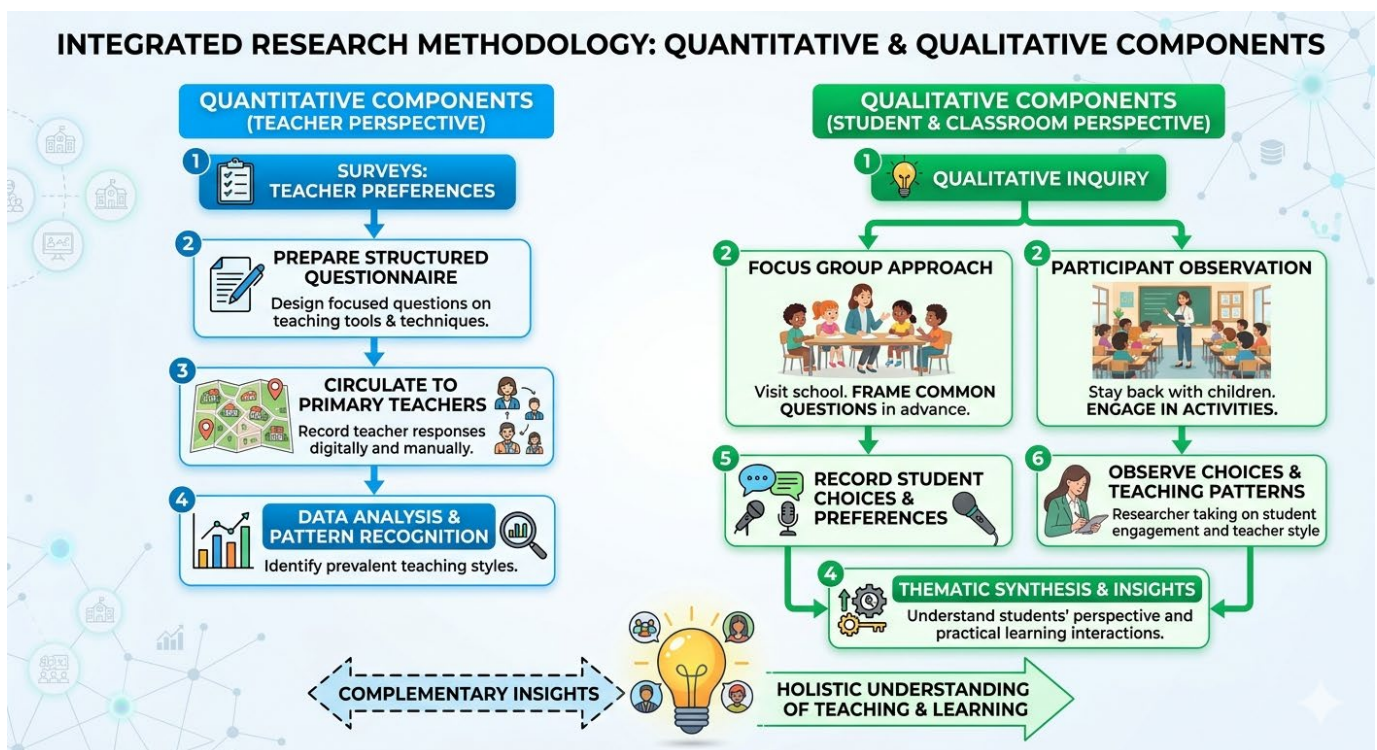


Fig 1: Shows the methodologies used in this research



Fig 2: Children's choices

Qualitative Components

Surveys - Teachers to be asked Various Questions in order to Withdraw what Tools or Techniques do they Prefer to teach their students.

A structured questionnaire to be prepared and circulated among Primary teachers to answer and Will record their responses.

Quantitative Components

Focus Group Discussion - A set of members to Visit the School Premises and talk with the Children in order to record the student's Choices and their preferences.

Before Visiting, a few common questions to be Framed in easy language so that the students would understand well and to be asked on the spot.

Participant Observation - Stay back in between the children, engage them in few activities and observe their choices and the Teaching Patterns that teachers Follow to make their students understand.

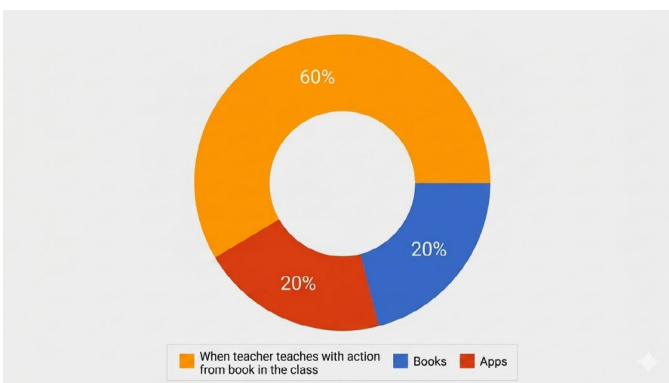


Fig 3: Preferences based on reading

RESEARCH QUESTIONS

In order to Understand the arrangement well, this study questions Children, Parents and Teachers. As Every fold of the education is must and their responses contribute in the successful study of this very topic.

The Questionnaires, GOOGLE FORMS were circulated through mails and whatsapp groups for all the three categories to respond well and easily.

Some of the Questions asked are as follows

Children/Students

- Which one do you pick first for fun reading: a storybook or an app with animated stories?
- Does Mobile App distract them?
- How much they use the physical copy of any book to study?
- Which App they use frequently for educational purposes?
- How many books do they read each week?
- What do they like the best- turning pages or swiping on a screen?
- Would they rather have a new physical book or a new learning app or subscription for an educational app as a gift?
- After reading a story, do they remember it better from a book or an app or when teacher teaches with action from book in the class?

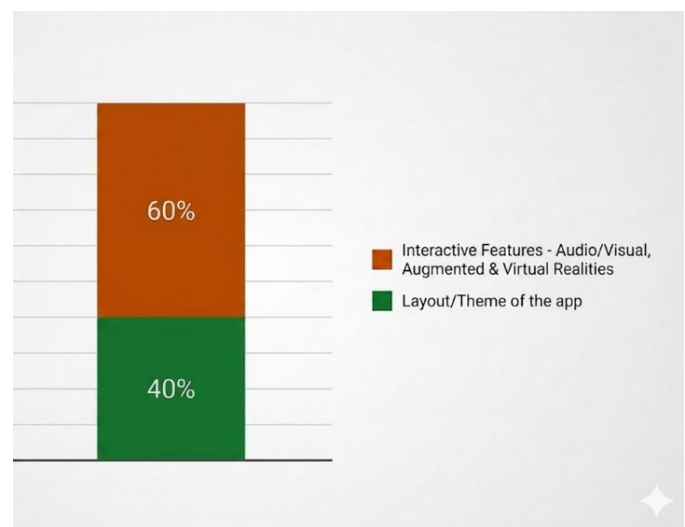


Fig 4: Visualizes the choice of children while choosing app

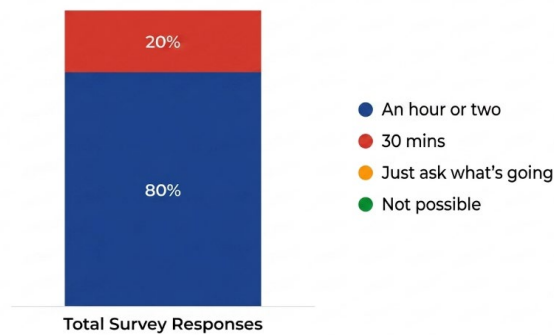


Fig 5: Shows educational time spent between Parent-Children

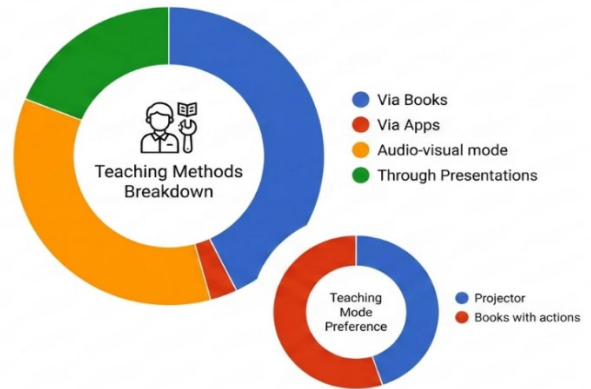


Fig 7: Teacher's Preferences

Parents

- Do they Study along with their children?
- How much time they spent together for educational purpose?
- Do they observe any kind of difference in their behaviour while learning via apps?
- What they-as parents feels about Digital Learning Apps? (Positive or Negative- Any 1 specific Point to be added)

Teachers

- What prefers most - Teaching On Projector or Reading a book with actions?
- If Prefer Apps, what do they consider at utmost priority?
- Does He/She thinks Digital apps should supplement Traditional learning?
- How effective is learning through educational E-Apps as compared to traditional face-to-face classroom learning?

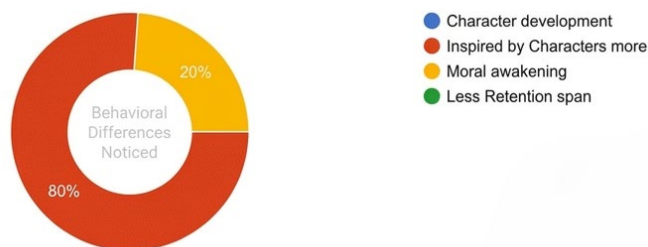


Fig 6: Behavioral differences according to parents

RESULTS & FINDINGS

Once all the responses were recorded then the process of data analysis begin and the findings of the study are the following-

Interpretation

When enquired what kind of fun reading they would choose- Most of them answered , they would pick a storybook over an app with animated story. This marks their interest of reading through books still continues. Figure 2.

Interpretation

When Further asked what do they remember from the stories they have learnt, they said they remember it a bit from books and a bit from apps but they remember the most of it when taught by teachers in the classroom with actions Figure 3.

Interpretation

They choose any app depending upon the Interactive Features like Audio/Visual, Augmented & Virtual Realities, Animation and followed by Layout/Theme and colors of the app and for the education purpose Interesting activities and Engaging Worksheets make them choose the apps Figure 4.

Interpretation

The image shows, Parent's responses when they were asked how much time do they spend with

their kids, for educational purposes. Many of them responded positively that they spend more than an hour with their kids to study along Figure 5.

Interpretation

Parents notice Behaviour change while learning from apps, they are inspired by the characters more and be like them, they behave like them. They feel digital apps have a positive impact on their kids, but also feel that excessive use of it causes less retention span and eye strain Figure 6.

Interpretation

The teachers choose to teach via books followed by audio-visual mode and through presentations. They use books synced by the body movements, expressions and gestures. The Projectors aid visual storytelling and increases attention span.

CONCLUSION

Education is an important and growing asset which each and every individual irrespective of Age, gender, with or without any differences should learn.

It is important to feel and live. For every child at a tender age it is important to learn from books, teachers and talk with them openly, as it holds many unfolded stories to narrate and many angles to look in and around. On the other hand, Digital Learning restricts in limits and gives only what aspect individual wants to look at.

So, for an individual it is really very important to look at both sides of the education system.

Recent India-focused research does not show digital learning apps as a full replacement for classroom teaching in primary education; instead, the strongest pattern is that digital tools work best when they supplement teacher-led, face-to-face instruction in a blended model (Yadav and Kumar, 2025).

Online classes were negatively affected by technological, infrastructural, parent-related, and student-related barriers, as well as by concerns about the health effects of technology use. Perceived effectiveness did improve attitudes, but the

paper reports that average effectiveness ratings for online classes were generally below the midpoint across dimensions such as engagement, learning outcomes, delivery, and practicality, indicating that parents did not see online classes as matching conventional schooling for young children (Sharma, 2023).

A notable finding is that teachers did not frame digital tools as a replacement for classroom teaching; instead, they repeatedly recommended balance, with some even suggesting ratios such as 80/20 in favour of face-to-face teaching for younger children. The paper therefore supports a supplement model rather than an app-first model in primary education.

Oza and Trivedi, 2021

Digital interventions can be effective when they are well designed and integrated with classroom instruction, citing the Andhra Pradesh Personalized Adaptive Learning program as evidence that digital tools can reinforce learning gains. Its main practical conclusion is that online education transforms but does not replace traditional education, and that the most credible future direction is blended delivery (Yadav and Kumar, 2025). Key findings include Yadav and Kumar, 2025 & Oza and Trivedi, 2021.

Teacher Guidance Boosts Digital Tools

Digital tools shine brightest under teacher supervision, enabling personalized pacing and deeper comprehension rather than standalone use. In primary settings, trained educators use platforms like Google Classroom or Kahoot! to foster collaboration and adapt content, with studies showing gains in motivation and special needs support. Without this guidance, effectiveness drops, as seen in reviews stressing long-term professional development.

Classroom Strengths for Young Learners

Traditional classrooms excel in socialization through peer teamwork, discipline via structured routines, hands-on experiments, and real-time checks on

understanding. Activities like science labs or group projects build critical thinking and emotional bonds that screens often lack, per hands-on learning research. Print materials further aid focus via tactile engagement, outperforming digital for deep reading in early years.

Digital Flexibility and Engagement

Apps provide multimedia, adaptive paths, and interactivity that heighten engagement, such as gamified math or narrated stories for pre-readers. Tools like Khan Academy Kids adjust difficulty dynamically, boosting retention in literacy and numeracy when blended with classwork. However, these benefits peak in short bursts with adult mediation to avoid overload.

Key Barriers in India

India faces device shortages, poor internet (only 15% household access), power outages, untrained teachers, and parental involvement gaps, hitting rural primaries hardest. Government efforts like NEP 2020 aim to bridge this, but infrastructure lags persist, limiting equitable rollout. Teacher training emerges as a top fix, with rural educators needing hands-on digital onboarding.

Screen Time Concerns for Children

Studies link excess screens (4+ hours daily) to 56% higher inattention in preschoolers, plus weaker attention, verbal skills, and interactions. Indian research echoes reduced spans and emotional health risks in urban kids exceeding limits. Online

assessments also falter in validity for young ones, favoring teacher observations.

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