NAGA ED.

THE LAND OF MINERALS
KIPHIRE DISTRICT

Learning Enhancement and Accessibility Project (LEAP), Kiphire

YEAR ONE

Innovating Education in Kiphire:

Bridging Gaps with Digital Solutions

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Foreword by

Kevisato Sanyu

I am honored to present Innovating Education in Kiphire: Bridging Gaps with Digital Solutions Report, a foundational document that reflects our commitment to transforming education in the Kiphire district. This report is the culmination of a comprehensive survey involving students, teachers, and school administrators, whose voices and insights are invaluable to our mission. I extend my heartfelt gratitude to all the participants for their openness and engagement.

I also wish to acknowledge and thank our esteemed program partners, the Kiphire District Administration and the NITI Aayog Aspirational Districts Programme. Their support and collaboration have been instrumental in driving this initiative forward, embodying a shared vision of educational excellence and equity.

The process of listening lies at the heart of our program design. Through our Listening Mission, we have engaged deeply with the Kiphire community, understanding their unique challenges, aspirations, and needs. This grassroots approach ensures that our educational interventions are not only relevant but also deeply rooted in the realities of those we aim to serve. By listening, we empower the very beneficiaries of our programs to shape their educational journeys, fostering a sense of ownership and engagement that is crucial for long-term success.

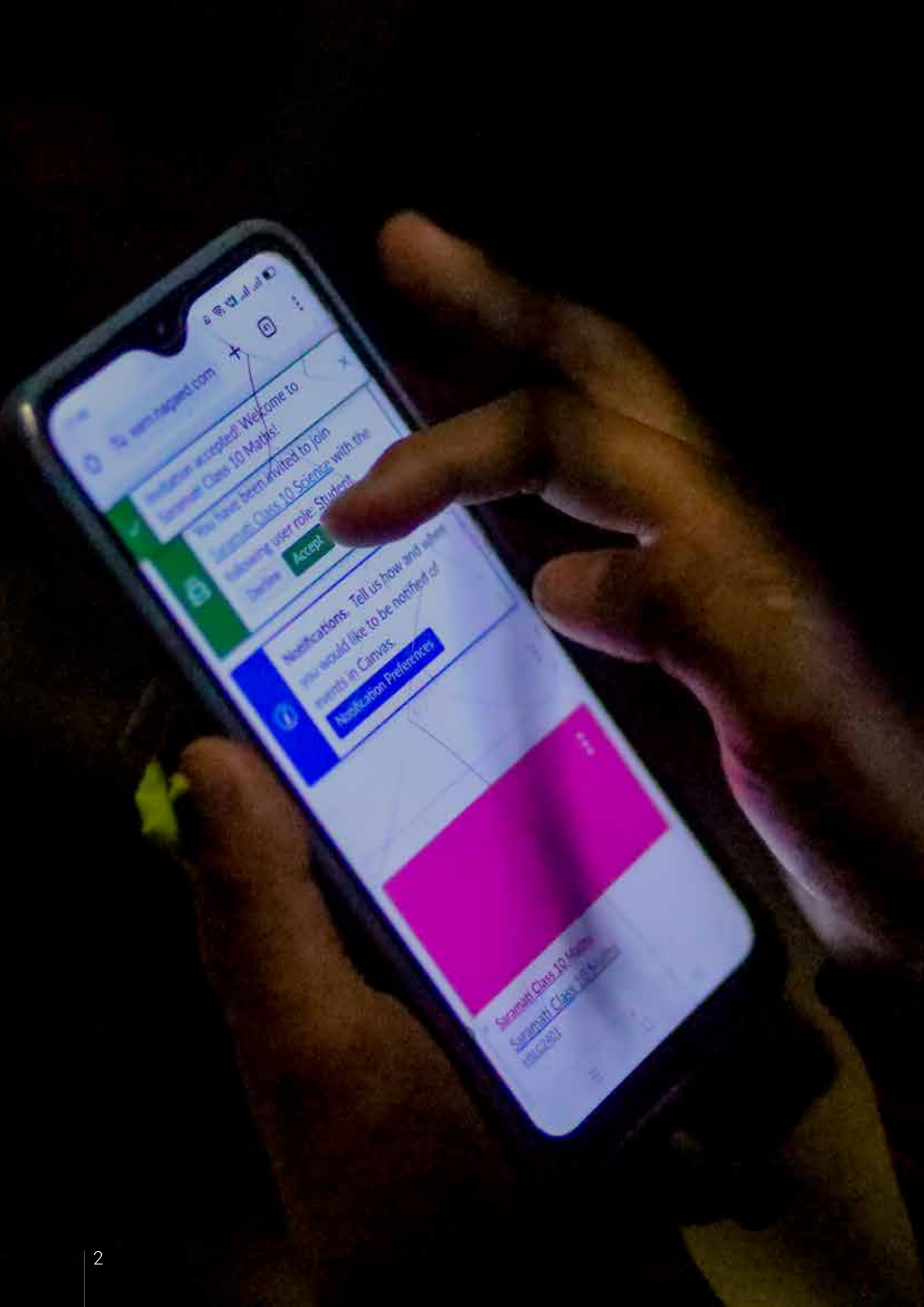
Building a program through generative listening allows us to not only hear but truly understand and respond to the specific needs, concerns, and strengths of the community. This participatory approach transforms education from a top-down directive into a collaborative, dynamic process that adapts and evolves with the community it serves.

As we look to the future, the possibilities are boundless. With the insights gleaned from this report, we are better equipped to develop and implement programs that will make a tangible difference in the lives of Kiphire's students. We envision a future where every child in Kiphire has access to high-quality education, where teachers are empowered with the tools and support they need, and where the community thrives through collective effort and shared success.

This report symbolizes our collective aspirations and the transformative power of education. Together, with the continued support of our partners and the community, we will create a legacy of learning and growth that will benefit generations to come.
Thank you for being part of this journey. Let us continue to listen, learn, and lead the way toward a brighter future for all.

Warm regards,

Kevisato Sanyu
Founder, NagaEd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Executive Summary

The survey reports reveal a complex picture of digital education in Kiphire district. Despite strong enthusiasm for technology's potential to enhance learning, significant challenges hinder successful implementation. These challenges, coupled with varying levels of access to digital resources and training, create a "digital divide" that must be addressed to unlock the full potential of digital education for all students in Kiphire.

- Students recognize the benefits of digital learning, finding digital content engaging and believing it can improve their academic performance. However, limited access to devices and unreliable internet connectivity pose significant obstacles.

- Teachers, while increasingly incorporating technology into their teaching, also face challenges with internet connectivity and device access. They rely heavily on personal devices, and a significant training gap exists despite high confidence in their digital skills.

- School administrators report disparities in infrastructure, highlighting a need for greater investment in resources and support. Many schools lack reliable power, essential for utilising technology effectively.

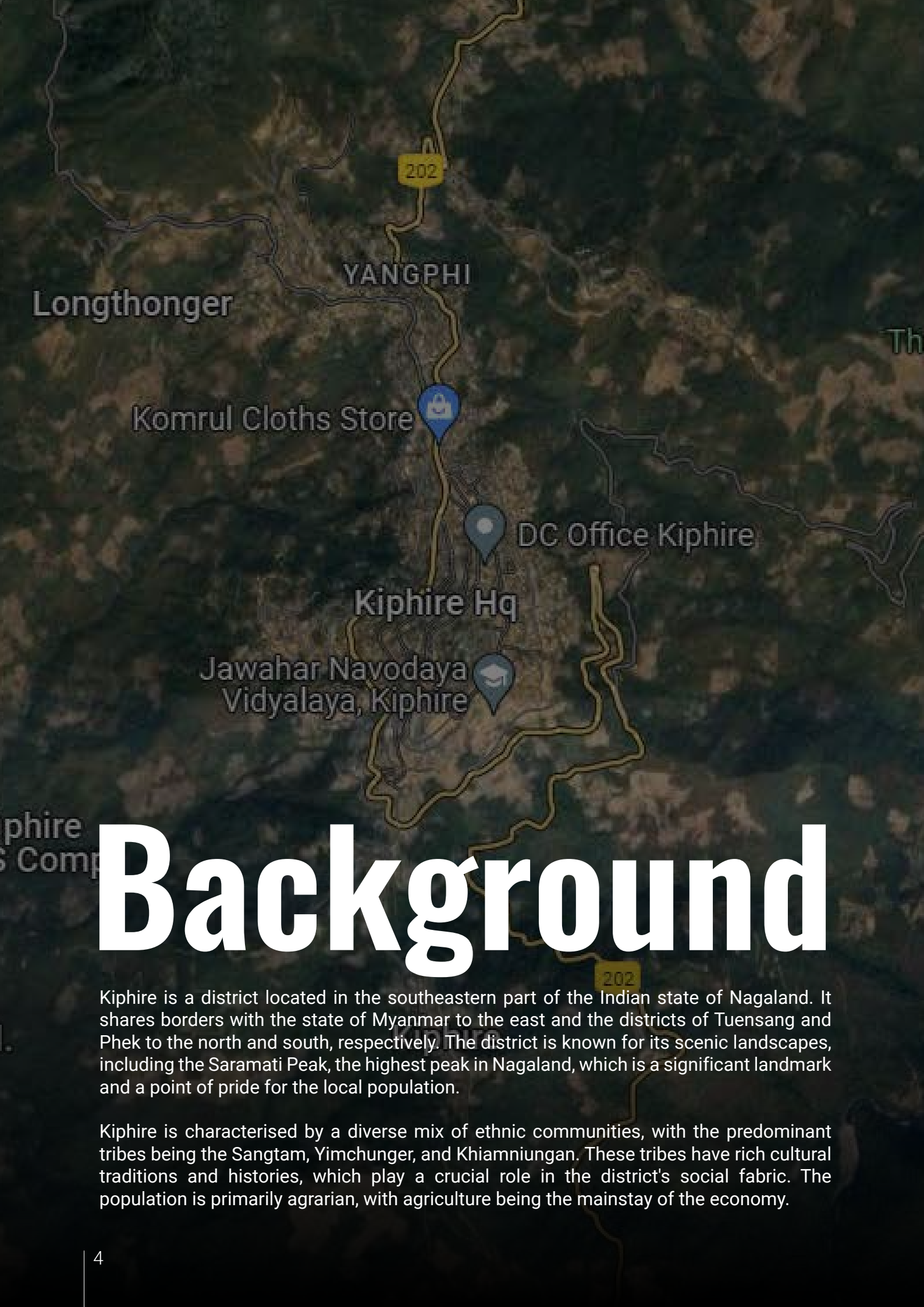
A multi-faceted approach is needed to bridge the digital divide and empower a future of technology-enhanced learning for all students in Kiphire. This approach must include:

- Addressing the digital divide by providing equitable access to devices and reliable internet connectivity for all students and teachers.

- Offering targeted and comprehensive training programs to enhance teachers' digital literacy skills and equip them to effectively integrate technology into their teaching. Investing in essential infrastructure improvements, such as reliable power supply, to ensure consistent access to digital resources.

- Exploring the potential of various digital tools and platforms to enhance learning experiences and cater to diverse learning needs.

By prioritising these areas, the education system in Kiphire can move beyond the current limitations and harness the full potential of digital education to create a more engaging, effective, and inclusive learning environment for all students, preparing them for success in an increasingly digital world.



Background

Kiphire is a district located in the southeastern part of the Indian state of Nagaland. It shares borders with the state of Myanmar to the east and the districts of Tuensang and Phek to the north and south, respectively. The district is known for its scenic landscapes, including the Saramati Peak, the highest peak in Nagaland, which is a significant landmark and a point of pride for the local population.

Kiphire is characterised by a diverse mix of ethnic communities, with the predominant tribes being the Sangtam, Yimchunger, and Khiamniungan. These tribes have rich cultural traditions and histories, which play a crucial role in the district's social fabric. The population is primarily agrarian, with agriculture being the mainstay of the economy.

Educational Landscape

Education in Kiphire, like in many parts of Nagaland, faces numerous challenges due to its remote location and limited infrastructure. Schools in the district range from primary to higher secondary levels, with a mix of government-run and private institutions. Access to quality education is a persistent issue, compounded by the lack of adequate resources and trained teaching staff. Places like Pungro register female literacy rates as low as 35.86%. Kiphire school dropout rates are 12 times above the national average.

Despite these challenges, there is a growing emphasis on improving educational outcomes. Initiatives by the state government, non-governmental organisations, and community efforts are focused on enhancing the quality of education and increasing enrollment rates, especially for girls and marginalised communities.

The Learning Enhancement & Accessibility Project (LEAP) by NagaEd is a transformative three-year initiative (June 2023 - June 2026) funded by the NITI Aayog Aspirational Districts Programme. The project tackles educational challenges in Kiphire district,

LEAP, in collaboration with the Kiphire district administration, targets 15 schools (government and private) in Kiphire and surrounding villages to improve the quality of education.

Introduction

Three surveys were conducted within the period of 28th September 2023 to 13th October 2023 in Kiphire district to examine the current state of digital education. The surveys were conducted in the respective schools in class which were then collected during the 'Listening Mission' conducted by NagaEd between 15th October 2023 to 20th October 2023.

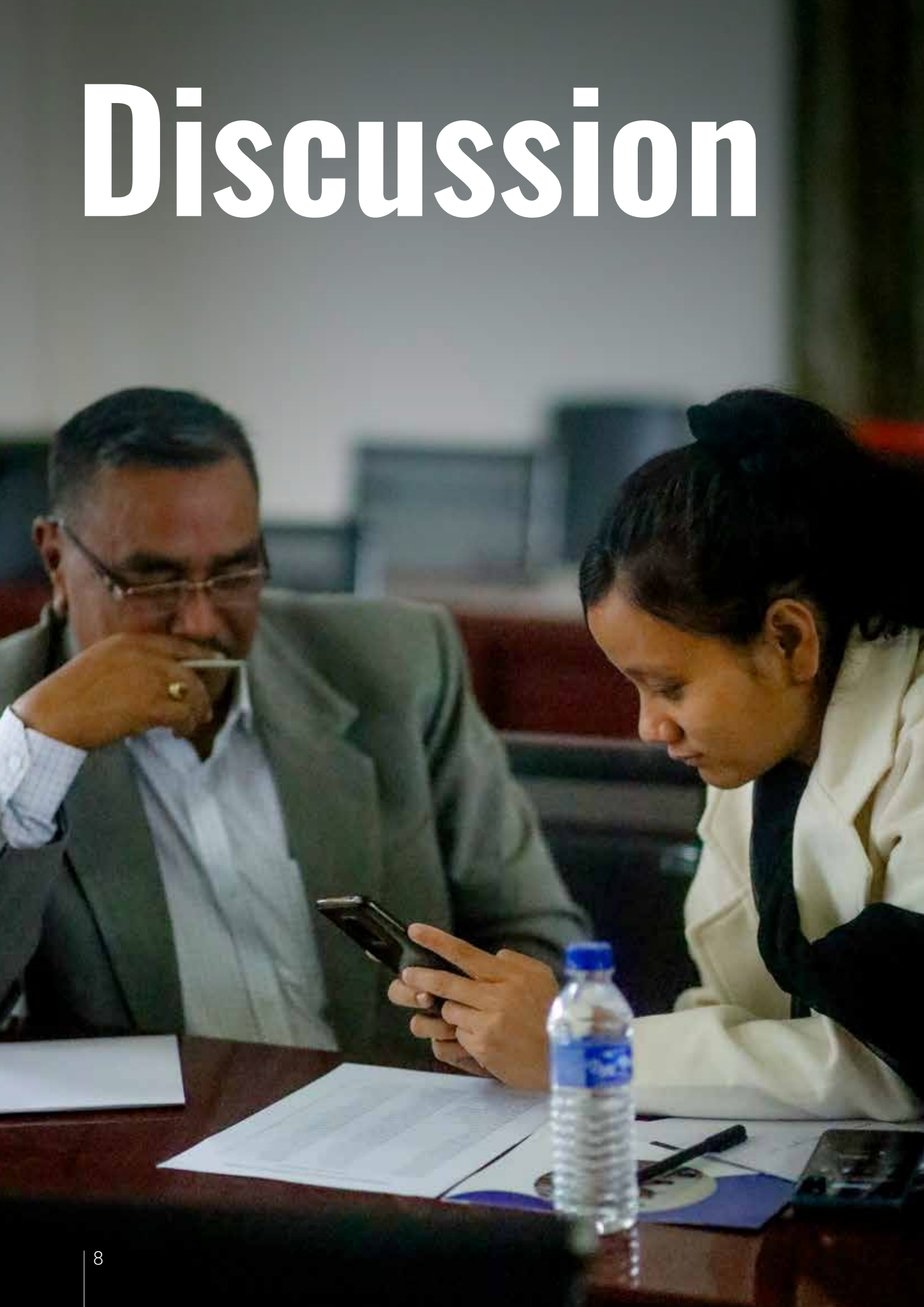
- The *Student Digital Education Perspectives Survey* collected data from 433 students in grades 9 and 10, attending 14 different schools, to understand their experience with and perspective on digital learning.

- The *Unveiling Teachers' Perspectives Survey* analysed responses from 75 teachers across 14 schools in Kiphire district, providing insights into teacher adoption of and attitudes toward digital education.

- *Discovering the Landscape of School Technology and Infrastructure* presents findings from a survey of 15 Kiphire district schools, focusing on school infrastructure, access to technology, and teacher training.

These surveys reveal a complex picture of digital education in Kiphire: high levels of enthusiasm for technology's potential to improve education are tempered by the reality of significant challenges, including unequal access to devices, inconsistent internet connectivity, and a lack of teacher training.

Discussion



Despite the recognized potential of digital education, a notable disparity exists between aspiration and implementation. While students, teachers, and school administrators express enthusiasm for integrating technology into education, significant challenges hinder its widespread and effective adoption. These challenges, if addressed strategically, can pave the way for a more inclusive and technology-empowered learning environment in Kiphire district.

Bridging the Digital Divide

The survey data reveals a concerning digital divide, with unequal access to devices and internet connectivity posing a significant barrier to digital education. A large percentage of students, particularly in government schools, lack personal devices and rely on family members for access, creating an uneven playing field. Furthermore, unreliable internet connectivity, even in schools with access, limits the types and quality of online learning activities. Addressing this digital divide is paramount to ensuring that all students can benefit from digital education. Providing devices, particularly to students in under-resourced schools, and ensuring consistent, reliable internet connectivity are crucial steps toward bridging this gap.

The *Student Digital Education Perspectives Survey* reveals a significant disparity in access to devices and internet connectivity between government and private schools in Kiphire district, underscoring the challenge of achieving educational equity in a digital age.

Device Accessibility:

The survey indicates a higher percentage of students in government schools lack access to personal devices compared to their counterparts in private schools, creating an immediate disadvantage.

- In government schools, approximately 36% of the students reported lacking access to personal devices (not having a device at all), while only 15.2% of students surveyed own a device.

- In contrast, about 17.6% of students in private schools reported lacking access to personal devices.

Implications:

This disparity in access has significant implications for students' learning experiences and outcomes:

- **Limited Engagement With Digital Resources:** Students without devices or reliable internet access are unable to fully engage with digital learning resources, which are increasingly becoming central to 21st-century education. This can limit their exposure to diverse learning materials, interactive exercises, and online learning platforms.

- **Exacerbated Educational Inequalities:** The lack of access to devices and the internet can exacerbate existing educational inequalities. Students from lower-income backgrounds, who are more likely to attend government schools, may fall further behind their peers in terms of digital literacy and academic achievement, perpetuating a cycle of disadvantage.

Potential Solutions Towards a More Level Playing Field:

Addressing this disparity requires a multifaceted approach that considers the specific needs and challenges of government schools:

- **Targeted Device Distribution Programs:** Implementing programs that provide free or subsidised devices to students in need, particularly those in government schools, would be a crucial first step. This could involve collaborating with technology companies, NGOs, or establishing government-funded initiatives to ensure equitable distribution.

- **Investing in School-Based Infrastructure:** Allocating resources to equip government schools with computer labs and devices that students can access during school hours can help bridge the gap in access. Ensuring reliable electricity and internet connectivity in these schools is crucial for maximising the use of digital resources.

- **Community-Based Solutions:** Establishing community centres with internet access can provide students without reliable internet at home with a space to study and complete digital assignments. Partnering with local businesses or organisations to offer free or subsidised internet plans to low-income families can address the affordability barrier.

By acknowledging and addressing this digital divide, policymakers, educators, and community stakeholders can work together to create a more equitable educational landscape in Kiphire, empowering all students to succeed in the digital age.

Empowering Teachers through Training

While teachers exhibit confidence in their ability to utilise digital tools, a significant gap exists between confidence and formal training. The majority of teachers have not received specific training in digital education, particularly in areas such as using educational apps, creating engaging digital content, and understanding learning management systems. This gap highlights the need for robust, targeted professional development programs. Equipping teachers with the necessary skills and knowledge will empower them to confidently and effectively integrate technology into their teaching practices. Training should not only focus on technical skills but also on pedagogical approaches for maximising the benefits of digital tools and practices for enhancing student learning.

The *Unveiling Teachers' Perspectives Survey* found that while nearly all teachers (98.7%) expressed confidence in using digital technology, a staggering 75% reported having received no formal training in digital education. This points to a critical gap: teachers may be personally comfortable using technology but lack the pedagogical training to leverage it effectively for teaching and learning.

Furthermore, teachers expressed a desire for professional development in specific areas. The *Unveiling Teachers' Perspectives Survey* showed 47% of teachers were open to receiving training, with interests ranging from utilising educational apps, to creating engaging content and understanding learning management systems. This indicates a clear need for tailored professional development that addresses specific teacher needs and helps them move beyond basic technology use to more sophisticated pedagogical applications.
The need for robust teacher training is further emphasised in the *Discovering the Landscape of Technology and Infrastructure Survey*, which showed that 80% of schools cited a lack of proper training in digital education as a significant barrier to integrating technology.

Teachers expressed interest in receiving training in several key areas:

- **Utilising educational apps:** This suggests a need for guidance on selecting, integrating, and effectively using educational apps to enhance teaching and learning.

- **Creating engaging content:** Teachers recognize the importance of presenting digital content in a captivating manner and require training on designing interactive lessons, developing multimedia materials, and incorporating engaging digital tools.

- **Understanding learning management systems (LMS):** This highlights the need for training on utilising LMS platforms for content delivery, assessment, student tracking, and communication.

Teachers are eager to learn and implement digital education:
The Unveiling Teachers' Perspectives Survey shows that 77.3% of teachers are willing to incorporate digital education, and 88% believe it can enhance student understanding. This eagerness suggests that ongoing support would be welcomed and could contribute to the successful long-term integration of technology in the classroom.

Schools face significant challenges in implementing digital education:
Both *the Unveiling Teachers' Perspectives Survey and Discovering the Landscape of School Technology and Infrastructure Survey* reports identify several barriers to effective digital education implementation, including a lack of devices, poor internet connectivity, and insufficient teacher training. These challenges highlight the need for continued support that goes beyond initial training to help teachers troubleshoot issues and adapt to evolving technological landscapes.

Students are enthusiastic about digital learning and confident in their teachers' abilities:
The *Student Digital Education Perspectives Survey* reveals that 94.7% of students are confident in their teachers' capacity to use digital tools effectively. This student confidence, coupled with their enthusiasm for digital learning, underscores the importance of equipping teachers with the support they need to meet student expectations and harness the full potential of technology in education.

Addressing Infrastructure Gaps

Beyond individual access to devices, limitations in school infrastructure pose a significant challenge to implementing digital education effectively. Many schools lack sufficient numbers of computers, laptops, smart TVs, and other digital resources. Unreliable power supply further hinders the use of technology, even when available. Schools with projectors often lack screens, limiting the effectiveness of these tools. To create an environment conducive to digital learning, investing in school infrastructure is essential. This includes ensuring a reliable power supply, adequate internet connectivity, and providing a sufficient number of devices to meet the needs of teachers and students.

Exploring Different Training Models and Best Practices

Digital tools should be thoughtfully integrated to complement and enhance existing teaching practices, not replace them. This approach aligns with the concept of blended learning, which combines the strengths of traditional and digital methods.

Strengths of Traditional Learning:

- The *Student Digital Education Perspectives Survey* highlights that a significant portion of students still rely on traditional study methods, with the majority (78.8%) using textbooks and notes provided by the school (perhaps, due to the unavailability of digital resources or lack thereof). This suggests that traditional materials continue to play an essential role in the learning process for many students.

Strengths of Digital Learning:

- The *Student Digital Education Perspectives Survey* found that students find digital content like educational videos and interactive quizzes more engaging (57%) and effective (46.2%) than traditional materials. This indicates a strong preference for interactive and engaging elements offered by digital learning.
- The same survey also reveals that a substantial 90.3% of students believe that digital tools help teachers improve the teaching-learning process in class. This implies that digital tools can complement and enhance traditional teaching methods, leading to a more effective learning environment.
- The *Unveiling Teachers' Perspectives Survey* indicates that 88% of teachers believe that digital education can enhance student understanding, and 98.7% agree that it can create a more interactive learning environment. This emphasises that teachers recognize the potential of digital tools to improve student engagement and comprehension.

Challenges of Digital Learning:

- Both the *Student Digital Education Perspectives Survey* and the *Discovering the Landscape of School Technology and Infrastructure Survey* highlight significant challenges in implementing digital learning effectively. These challenges include unequal access to devices and internet connectivity, inadequate digital infrastructure in schools, and a lack of proper training for teachers in digital pedagogy.
- Specifically, the *Discovering the Landscape of School Technology and Infrastructure Survey* reveals that over half (53.33%) of schools report their students lack personal devices and a similar proportion of schools (53.33%) lack internet connectivity. Additionally, the survey indicates that even when internet access is available, quality is a major concern, with 40% of schools reporting poor or very poor connectivity. This suggests that a complete reliance on digital learning could exacerbate the existing digital divide and leave some students behind.

The identified needs in the surveys suggest several approaches and best practices:

- **Blended learning models:** Combining online modules with face-to-face workshops could provide flexibility and personalised learning experiences. Online modules could cover foundational concepts and allow teachers to learn at their own pace. In-person workshops could facilitate hands-on practice, peer learning, and direct interaction with trainers.

- **Focus on practical application:** Training should emphasise the practical application of digital tools and strategies within the specific classroom context. Case studies, lesson-planning activities, and peer-teaching opportunities could be incorporated to bridge the gap between theory and practice.

- **Contextualised training content:** Training should align with the curriculum, available resources, and specific challenges faced by Kiphire schools. This localised approach ensures relevance and practicality for teachers.

- **Ongoing support and mentorship:** The findings implicitly emphasise the need for ongoing support by highlighting the challenges schools face in implementing digital education. Providing continuous professional development opportunities, establishing mentorship programs, and creating communities of practice can empower teachers to effectively integrate digital pedagogy in the long term.

By addressing these specific training needs through thoughtfully designed programs, Kiphire schools can empower teachers to confidently and effectively leverage technology to enhance the learning experience for their students.

Enhancing Student Engagement and Learning Outcomes with Digital Tools

The provided sources offer numerous examples of digital learning practices that can enhance student engagement and improve learning outcomes:

- **Interactive Learning:** Digital tools can create a more interactive and engaging learning environment. For instance, educational videos and interactive quizzes can be incorporated into lessons to explain complex concepts, assess understanding, and provide immediate feedback. This aligns with the finding that students find digital content more engaging than traditional materials.

- **Personalised Learning:** Digital tools can facilitate personalised learning experiences. For instance, students could use educational apps and software to learn at their own pace, focusing on areas where they need additional support. This could be particularly beneficial for students who have significant after-school commitments and have limited time for traditional homework or study.

- **Collaborative Learning:** Digital tools can foster collaboration and communication among students. For instance, online platforms and tools can be used for group projects, discussions, and peer-to-peer learning.

Interactive Simulations: Although the sources do not specifically mention interactive simulations, they emphasise the effectiveness of interactive learning experiences. Simulations could be particularly useful for subjects like science and maths, where students can manipulate virtual objects and experiment with different variables to deepen their understanding of complex concepts. This information about the potential benefits of interactive simulations in science and maths is not explicitly mentioned in the provided sources and may require independent verification.

- **Educational Games:** The sources highlight teachers' openness to incorporating educational games into their teaching. These games can make learning more engaging and fun, motivating students to actively participate and progress through different levels or challenges. Gamified elements like points, badges, and leaderboards can further enhance motivation and foster a sense of healthy competition among students.

- **Multimedia Content:** Students find digital content like educational videos and interactive quizzes more engaging and effective than traditional materials. Videos can present information in a visually appealing and easily digestible format, catering to different learning styles. Interactive quizzes offer immediate feedback, allowing students to assess their understanding and identify areas where they may need further review.

Addressing After-School Commitments

The survey data reveals that students have significant commitments outside of school hours, with a majority engaged in household chores and a considerable number attending tuition. These commitments may impact students' availability for homework, self-study, and leisure activities, potentially affecting their overall well-being and academic performance. While not directly related to digital education infrastructure, this information highlights a potential challenge in ensuring that students have adequate time and opportunity to engage with digital learning resources. Schools and educators should be mindful of these external factors and explore ways to integrate digital learning within the existing constraints of students' schedules.

Leveraging Student Enthusiasm for Digital Learning in Kiphire

The *Student Digital Education Perspectives Survey* reveals that students in Kiphire district are enthusiastic about digital learning and recognize its potential to enhance their education. A substantial 90.3% believe that digital tools help teachers improve learning, and 81.3% think digital education can help improve their understanding of challenging subjects. Furthermore, 76.4% believe it can improve their study performance. This positive outlook is tempered by significant concerns about access and implementation.

Addressing the Digital Divide:

A significant finding of the survey is the prevalent digital divide among students. A notable 66.5% of students are worried about internet access and device availability, with 23% extremely concerned about these challenges. This concern is exacerbated by the fact that only 15.2% of students own a device. The survey highlights a stark difference in access between government and private school students, with 36% of government school students lacking access to personal devices, compared to 17.6% in private schools.

Bridging this divide is crucial to leveraging student enthusiasm for digital learning. Potential solutions could involve:

- **Providing Subsidies or Funding:** Initiatives could be introduced to provide financial assistance for students to acquire devices.
- **Community Device Banks:** Establishing shared device programs, where students can borrow devices, could address accessibility issues.
- **Investing in School Infrastructure:** Allocating resources to ensure reliable internet connectivity and access to digital devices within schools, particularly in government schools, is essential.

Effective Implementation and Teacher Training:

While students express confidence in their teachers' ability to use digital education, with 94.7% trusting their teachers' competence in this area, the survey reveals a significant need for teacher training. Equipping teachers with the necessary skills to effectively integrate digital tools is paramount. Emphasising training in areas such as utilising educational apps, creating engaging digital content, and implementing blended learning approaches will be crucial.

The survey also highlights the importance of understanding and addressing the significant after-school commitments of students, which might limit their time for digital learning. Finding ways to integrate digital learning within the school day or providing flexible learning options could help overcome this challenge.

Further Research

While the surveys provide valuable insights into the state of digital education in Kiphire district, they also highlight areas for further exploration. Investigating the specific types of digital learning activities teachers are currently implementing, the level of student engagement with various digital learning platforms, and the effectiveness of different professional development programs for teachers could provide a more nuanced understanding of the challenges and opportunities in this domain.

By strategically addressing the digital divide, providing comprehensive teacher training, investing in robust school infrastructure, and exploring the potential of LMS platforms, the Kiphire district can unlock the full potential of digital education, empowering both students and educators to thrive in a technology-driven world.

Recommendations

1 Bridge the Digital Divide by Prioritising Equitable Access

A core finding of this report is the significant digital divide present in the district's schools. This divide is characterised by unequal access to digital devices and reliable internet connectivity, primarily impacting students in government schools. The findings emphasise that without equitable access to these resources, realising the potential of digital education to enhance learning outcomes for all students, particularly those in underserved communities, is impossible.

Device Accessibility: Levelling the Playing Field

The findings stress that providing devices to students, especially those in government schools, is non-negotiable. This is because a significant proportion of students lack personal devices and rely on family members for access. This reliance creates an uneven playing field where students from less advantaged backgrounds are immediately disadvantaged. The findings suggest a multi-pronged approach to resolving this, including:

- **Targeted Device Distribution Programs:** Implementing programs that provide free or subsidised devices to students in need, particularly those in government schools. This might involve collaborations with technology companies, NGOs, or government-funded initiatives.

- **Investing in School-Based Infrastructure:** Allocating resources to equip government schools with computer labs and devices that students can access during school hours. Ensuring reliable electricity and internet connectivity in these schools is also crucial.

- **Community-Based Solutions:** Establishing community centres with internet access can provide students without reliable internet at home with a space to study and complete digital assignments. Partnering with local businesses or organisations to offer free or subsidised internet plans to low-income families can address the affordability barrier.

Addressing the Internet Connectivity Crisis

The findings highlight unreliable and often poor internet connectivity as a significant barrier to digital education in Kiphire. This challenge is particularly acute in government schools, limiting the types and quality of online learning activities possible. The findings advocate for a multifaceted approach, including:

- **Government Initiatives for Enhanced Digital Infrastructure:** Advocating for policy changes and increased government investment in expanding and improving internet infrastructure across the Kiphire district. This is especially important in remote and underserved areas where internet access is limited or non-existent.

- **Community Partnerships for Improved Internet Access:** Schools can explore collaborations with local businesses or internet providers to provide free or subsidised internet access to students' homes. This addresses the affordability barrier that many families face, particularly those with multiple children.

2 Empower Teachers through Targeted and Comprehensive Training

The findings stress the critical need for comprehensive teacher training in digital education. While teachers express confidence in their basic digital skills, the findings reveal a significant disparity between this confidence and the possession of pedagogical training needed to effectively integrate technology into the classroom. This gap is particularly concerning given that the majority of teachers have not received formal training in digital education.

Addressing Specific Training Needs

The findings emphasise that training programs should move beyond basic technology skills and focus on pedagogical approaches that maximise the benefits of digital tools for student learning. It identifies several key areas where teacher training is needed:

- **Utilising Educational Apps:** Teachers need guidance on selecting, integrating, and effectively using educational apps to enhance their teaching and learning activities. This includes understanding the pedagogical value of different apps, aligning app usage with curriculum goals, and troubleshooting technical issues.

- **Creating Engaging Content:** Recognizing that digital content needs to be engaging and captivating, teachers require training in designing interactive lessons, developing multimedia materials, and incorporating digital tools that enhance student interest and comprehension.

- **Understanding Learning Management Systems (LMS):** With an increasing emphasis on blended learning, teachers need training on utilising LMS platforms effectively. This includes content delivery, assessment, student progress tracking, and communication tools within the LMS.

The Importance of Context and Ongoing Support

The findings highlight that effective training should be contextualised to address the specific challenges and resource constraints faced by Kiphire schools. This includes aligning training content with the curriculum, and available digital resources, and addressing the reality of inconsistent internet connectivity.

Furthermore, the findings implicitly emphasise the need for ongoing support by highlighting the many challenges schools face in implementing digital education. It suggests that providing continuous professional development opportunities, establishing mentorship programs, and creating communities of practice can empower teachers to effectively integrate technology into their classrooms. This ongoing support is crucial for teachers to stay updated with evolving technological landscapes and address the specific challenges they encounter.

3 Invest in Essential School Infrastructure Improvements

The findings underscore the crucial role of robust school infrastructure in leveraging digital education. While aspirations for digital integration are high, the findings identify significant infrastructural gaps hindering effective implementation.

Power Supply: A Critical Bottleneck

A reliable power supply is fundamental for utilising digital tools, yet the findings reveal this is a significant challenge in Kiphire. Although 60% of schools have classrooms equipped with lighting and plug points, 20% experience inconsistent power supply, disrupting digital learning activities and impacting the functionality of essential equipment. The findings stress the need for consistent power to maximise the benefits of digital resources.

Internet Connectivity: Bridging the Gap

The findings identify unreliable internet connectivity as a major obstacle to digital education in Kiphire. Only 33.33% of schools reported reliable internet access for more than two hours daily. Furthermore, even when available, internet quality is often poor, with 40% of schools experiencing poor or very poor connectivity, hindering access to online resources and impacting the effectiveness of digital learning platforms.

The findings suggest that investing in the following areas is essential for creating an environment conducive to digital learning:

- **Reliable Power Supply:** The findings advocate for exploring alternative energy sources, such as solar power, to ensure consistent power supply to schools, particularly in areas with unreliable grid connectivity.

- **Adequate Internet Connectivity:** The findings highlight the need for increased government investment in telecommunications infrastructure to improve internet reliability and expand its reach to underserved areas. Additionally, it suggests promoting community-based solutions, such as community-owned and operated Wi-Fi networks, to provide more immediate solutions in areas with limited infrastructure.

- **Sufficient Digital Devices:** While the initial query focused on infrastructure, the findings consistently link infrastructure improvements to the need for sufficient digital devices. It emphasises that providing a sufficient number of computers, laptops, smart TVs, and projectors is crucial. Additionally, it emphasises the need to address the lack of screens in schools that have projectors, hindering their effective utilisation.

4 Exploring the Potential of Digital Tools to Enhance Learning in Kiphire

The findings provide a robust examination of the existing digital education landscape in Kiphire, highlighting both the aspirations and challenges. These findings strongly advocate for exploring and implementing various digital tools to enhance the learning experience for students.

Specific Digital Tools and Their Applications: While the findings don't explicitly list every potential digital tool, it emphasise several key areas and applications:

Addressing Specific Training Needs

The findings emphasise that training programs should move beyond basic technology skills and focus on pedagogical approaches that maximise the benefits of digital tools for student learning. It identifies several key areas where teacher training is needed:

- **Educational Apps:** The findings highlight the need for training teachers on utilising educational apps effectively. This suggests exploring apps designed for specific subjects, age groups, or learning styles.

- **Engaging Content Creation:** Teachers expressed a desire for training on creating engaging digital content. This points towards incorporating multimedia elements like videos, animations, and interactive exercises into lessons.

- **Learning Management Systems (LMS):** The findings emphasise the importance of understanding and implementing LMS platforms. Utilising an LMS can streamline content delivery, facilitate online assessments, and improve communication between teachers, students, and parents.

- **Interactive Learning Experiences:** The findings highlight the effectiveness of interactive elements like educational videos and quizzes. Exploring tools that offer simulations, gamified learning, and virtual labs can further enhance engagement and understanding.

5 Implement Blended Learning in Kiphire Schools

The findings strongly suggest that implementing a blended learning approach, which combines traditional teaching methods with strategic integration of digital tools and resources, would be a highly effective strategy for enhancing the quality of education in Kiphire.

Bridging the Gap: Blended learning merges traditional teaching (textbooks, direct instruction) with digital tools (educational apps, online platforms). This approach is particularly relevant to Kiphire as it acknowledges the existing reliance on traditional methods (78.8% of students use textbooks) while leveraging student enthusiasm for digital learning (81.3% believe it improves understanding).

Addressing Inequality: The findings highlight a stark digital divide. Blended learning becomes a tool for inclusion, not exclusion. Schools with limited resources can utilise readily available tools like basic mobile phones for activities such as:

- **Offline Content Delivery:** Sharing educational videos or audio lectures via Bluetooth for offline consumption.
- **SMS-Based Quizzes and Polls:** Engaging students and gauging understanding using simple text messaging.

Practical Implementation Steps:

1. **Prioritise Teacher Training:**
   This is paramount. The findings show teachers are willing (77.3%) but lack formal digital pedagogy training (75%). Training must be contextualised:
   - **Focus on Kiphire's Needs:** Less on the theoretical advantages of technology, and more on using readily available tools (like those mentioned above).
   - **Hands-On Approach:** Include sessions on adapting existing lesson plans into blended formats. For example, using local stories as a basis for creating digital presentations.
2. **Gradual Integration: Instead of school-wide, start with:**
   - **Pilot Programs:** Choose a few subjects or classes, assess, and refine. This allows for manageable troubleshooting.
   - **Teacher Champions:** Identify tech-savvy educators to lead, mentor, and build confidence among peers.
3. **Leverage Existing Resources:**
   The findings indicate some schools have projectors, albeit with limited screens. Maximise their use:
   - **Rotating Schedules:** Share resources among classes, ensuring equitable access.
   - **Community Viewing:** Utilise projectors for after-school educational screenings for students and parents, promoting community engagement.

4. **Content is King, Not Just Tech:**
    - **Locally Relevant Material:** Encourage teachers to create digital content using local examples, making learning relatable.
    - **Language Considerations:** Ensure digital content is available in languages understood by all students, promoting inclusion.
5. **Continuous Evaluation and Adaptation:** This is crucial given Kiphire's evolving context.
    - **Student Feedback:** Regularly seek input on what's working and what's not.
    - **Sharing Best Practices:** Encourage teacher collaboration to share successes and adapt strategies.

6 Leverage Enthusiasm to Implement Digital Education

The findings reveal significant enthusiasm for digital education among both students and teachers. This presents a powerful opportunity to drive the successful implementation of digital learning initiatives in Kiphire district. However, this enthusiasm must be carefully channelled and supported to overcome existing challenges and ensure equitable access and effective integration of technology in education.

Leveraging Student Enthusiasm:

- **Acknowledge and Address Concerns:** The findings indicate that while students are enthusiastic about digital learning, they also harbour concerns about access and implementation. Openly acknowledging these concerns will build trust and demonstrate a commitment to addressing them.

- **Student Input and Feedback:** Actively solicit student input on the types of digital tools and resources they find most engaging and beneficial. Establish feedback mechanisms to ensure student voices are heard throughout the implementation process. This will foster a sense of ownership and increase the likelihood of successful adoption.

- **Showcase Success Stories:** Highlight and celebrate successful implementations of digital learning within the district. Sharing student testimonials and examples of how technology has enhanced learning can motivate both students and teachers.

Leveraging Teacher Enthusiasm:

- **Targeted Professional Development:** The findings highlight a significant gap in formal training for teachers, despite their enthusiasm for digital education. Providing targeted professional development opportunities that focus on the effective integration of technology into teaching practices is crucial. This includes training on:
    - Utilising Educational Apps
    - Creating Engaging Digital Content
    - Understanding and Implementing Learning Management Systems
- **Ongoing Support and Mentorship:** Recognize that implementing digital education is an ongoing process. Establish mentorship programs that pair experienced technology-using educators with those who are newer to digital learning. Create communities of practice where teachers can share best practices, troubleshoot challenges, and learn from each other.

- **Recognize and Reward:** Acknowledge and reward teachers who are effectively integrating technology into their classrooms. This could include recognition in school events, opportunities to share their experiences with colleagues, or small grants to further develop their digital teaching practices.

By harnessing the enthusiasm of both students and teachers, the Kiphire district can create a powerful force for positive change in its education system. Addressing concerns, providing necessary support, and celebrating successes will be essential to fully leveraging this enthusiasm and ensuring the successful implementation of digital education initiatives.

7 Address After-School Commitments

The findings indicate that many students have significant time commitments outside of school, primarily dedicated to household chores and tuition. While the discussion doesn't offer specific recommendations for addressing how these commitments might impact students' ability to engage in digital learning, it acknowledges that these factors may limit the time available for homework, self-study, and leisure, potentially affecting their overall well-being and academic performance.

The findings emphasise the need for schools and educators to be mindful of these external factors and to explore ways to integrate digital learning within the existing constraints of students' schedules. This suggests that finding ways to alleviate the pressure of after-school commitments or to incorporate digital learning into existing structures, could be beneficial in ensuring that all students have the time and opportunity to benefit from digital education initiatives.

Conclusion

The Kiphire Baseline Report reveals a compelling narrative of aspiration and challenge in the realm of digital education. While students, teachers, and administrators recognize the immense potential of technology to transform learning, significant obstacles hinder its widespread and effective implementation. The report illuminates a critical digital divide, with unequal access to devices and unreliable internet connectivity posing significant barriers to equitable participation in a digital learning environment. This disparity is particularly evident between government and private schools, underscoring the need for targeted interventions to level the playing field.

The report emphasises that teachers are the cornerstone of successful digital education integration. While educators express confidence in their basic digital skills, there is a significant need for comprehensive professional development programs that focus on pedagogical approaches to leveraging technology for enhanced learning outcomes. Equipping teachers with the skills to create engaging digital content, utilise educational apps effectively, and navigate learning management systems will be crucial in maximising the impact of digital education initiatives.

Addressing infrastructural limitations is paramount to creating an environment conducive to digital learning. Investing in reliable power supply, expanding internet connectivity, and ensuring adequate devices for all students are essential steps toward bridging the digital divide. The report advocates for a multi-faceted approach that involves government investment, community partnerships, and exploration of innovative solutions to address these challenges effectively.

With targeted interventions outlined is this report, Kiphire district can move beyond the current limitations and harness the full potential of digital education. This transformation will require a collective effort from policymakers, educators, parents, and the community to ensure that all students have the opportunity to thrive in an increasingly digital world. By embracing the promise of digital education and proactively addressing the challenges it presents, Kiphire can pave the way for a brighter future for its students and empower them to become active participants in the global digital landscape.

Appendix

A1: Unveiling Students' Perspectives on Digital Learning

This survey of 433 students in Kiphire district reveals diverse perspectives on digital learning. Students acknowledge both the promise and challenges of digital learning. While they appreciate its benefits, concerns about access to devices and internet connectivity remain. They value their teachers' digital skills but emphasise the need for enhanced training to effectively integrate digital tools into teaching. Despite significant after-school commitments, students demonstrate a willingness to embrace digital learning, highlighting its potential to improve engagement, effectiveness, and future job prospects. The survey underscores the potential of digital education for improving learning outcomes and future job prospects, highlighting the importance of addressing access and implementation challenges to ensure its equitable distribution.

Respondents

Diverse Sample of Students Surveyed:
The Survey encompassed a diverse sample of 433 students across 14 schools in Kiphire district, representing a range of educational backgrounds.

Varied School Types:
Participants hailed from both government and private institutions, with 194 (44.80%) students from government schools and 239 (55.20%) from private schools.

Grade Distribution:
The majority of respondents (265 or 61.20%) were from Class 9, while the remaining 168 (38.80%) were from Class 10.

Key Takeaways

- **Digital learning holds promise:**
  Students are receptive and see its potential benefits.
- **Bridge the digital divide:**
  Unequal access to devices and the internet hinders implementation.
- **Teacher training crucial:**
  Equipping teachers with the necessary skills is essential for effective digital education.
- **Balance traditional and digital:**
  Students still value traditional materials, so a blended approach is recommended.

Key Findings

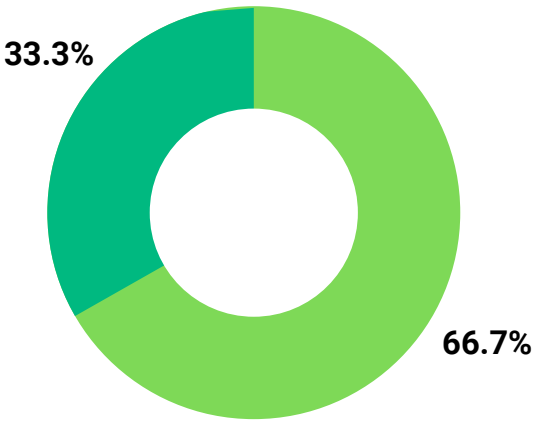
A significant portion of students rely on traditional study methods, but there is a strong interest in digital learning.

- The majority (66.7%) of students have used electronic devices for study with portable devices like tablets and mobile phones being the preferred device (tablet or mobile).

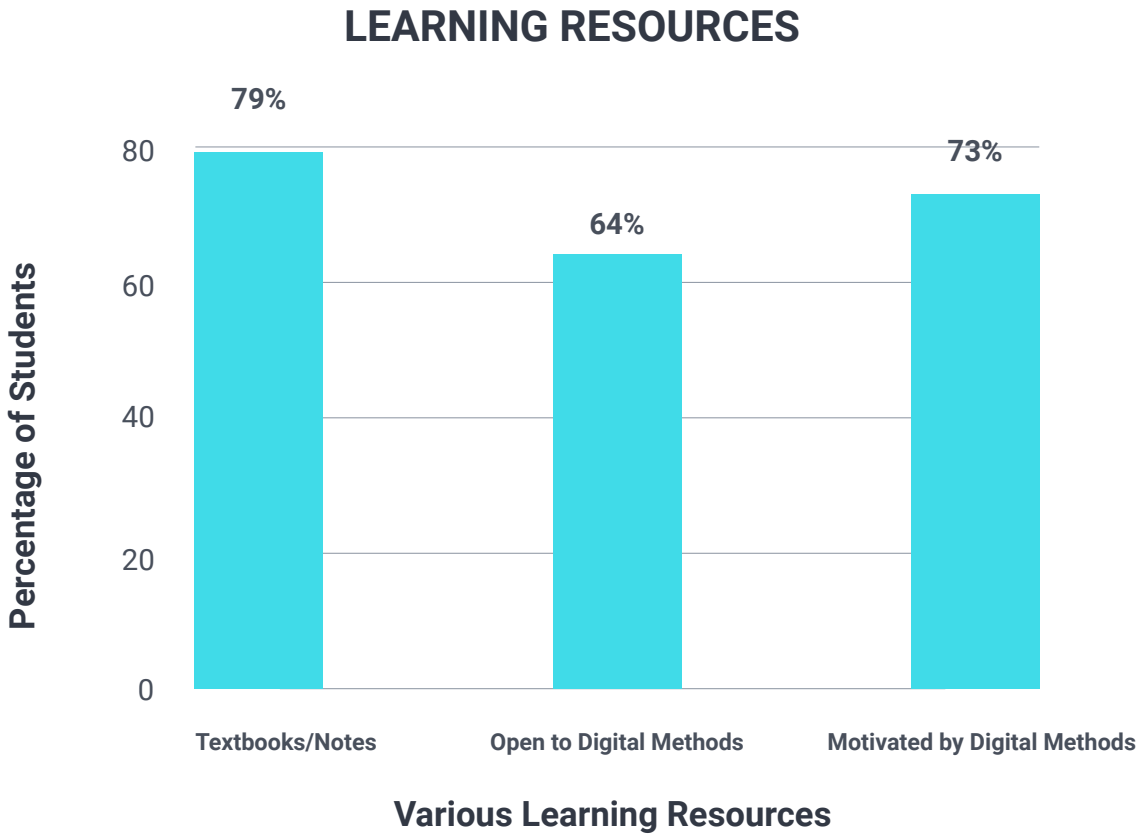
Use of Technology for Educational Purposes

66.7%
of students use electronic devices to study.

33.3%
of students don't use an electronic device to study.



- A majority of students, 78.8% use textbooks and notes provided by the school, yet 64.2% are open to learning through various digital methods and platforms.
- 73% of students are motivated to learn through digital platforms, highlighting a growing interest in digital education despite the current reliance on traditional resources.

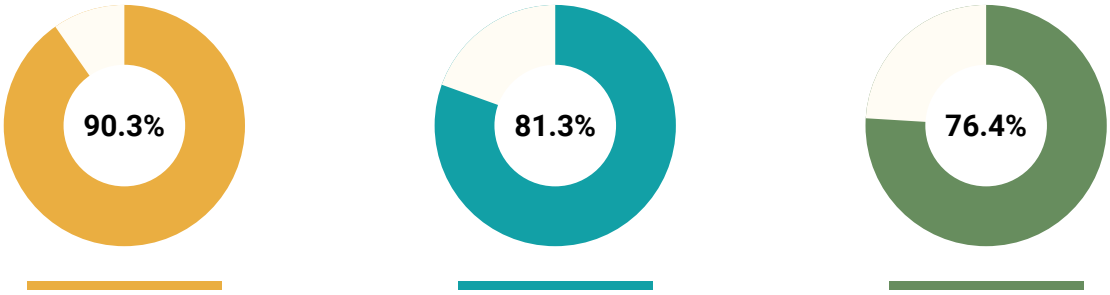


Students recognize the potential benefits of digital education, particularly in enhancing learning experiences and academic performance.

- A substantial 90.3% believe that digital tools help teachers improve learning in class, and 81.3% think digital education can help improve their understanding of challenging subjects.

- 76.4% of students believe that digital education can improve their study performance, indicating high expectations for the impact of digital learning on academic success.

POTENTIAL BENEFITS OF DIGITAL EDUCATION



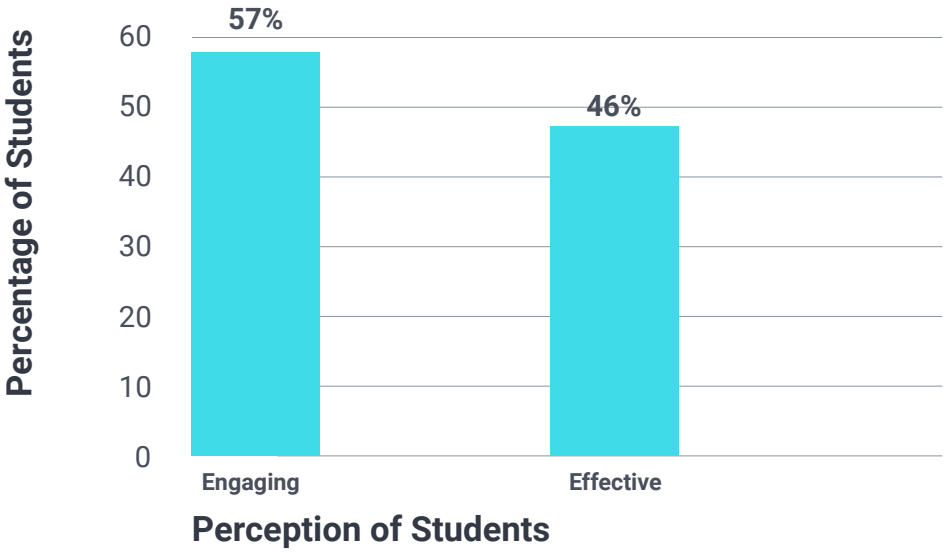
90.3% believe that digital tools help teachers improve learning in class.

81.3% think digital education can help improve their understanding of challenging subjects.

76.4% of students believe that digital education can improve their study performance.

- Students find digital content like educational videos and interactive quizzes more engaging (57%) and effective (46.2%) than traditional materials, suggesting a preference for interactive learning modes.

PERCEPTION OF STUDENTS TOWARDS DIGITAL CONTENT



- Government school students, on average, perceive the potential benefits of digital education in enhancing their academic performance more positively compared to private school students. This could reflect a greater relative impact or perceived value of digital education initiatives in government schools, where such resources might be a more significant change or addition to their learning environment.

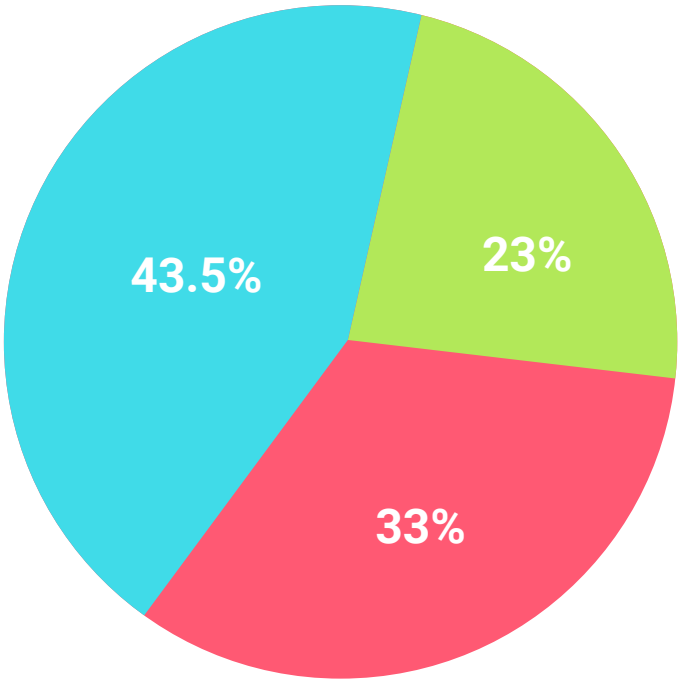
Access to digital resources and internet connectivity remain significant concerns among students.

- A notable 66.5% of students are worried about internet access and device availability, with 23% extremely concerned about challenges related to internet connectivity and access to devices.

Student Concerns

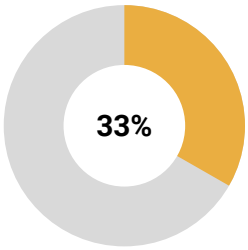
Internet & Device Access

- Worried
- Extremely Worried
- Not Worried

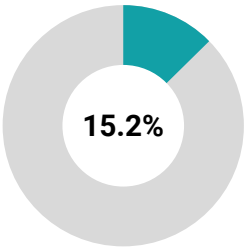


- A significant portion, 33% of students do not use electronic devices for study. Only 15.2% of students own a device, while 48.3% rely on family members for access to a device.

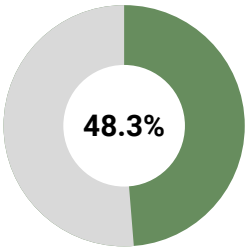
ACCESS TO ELECTRONIC DEVICES



33% of students do not use elecronic devices for study



15.2% of students own a device

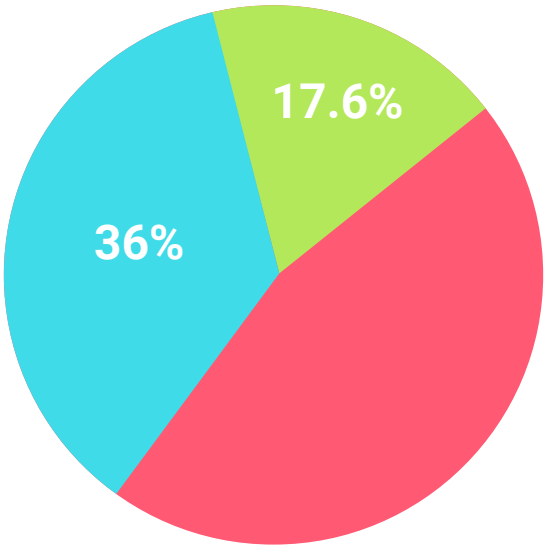


48.3% rely on family members for access to a device

- A higher percentage of students in government schools lack access to personal devices compared to their counterparts in private schools.
  - In government schools, approximately 36% of the students reported lacking access to personal devices (not having a device at all).
  - In private schools, about 17.6% of the students reported lacking access to personal devices.

Lack of Access to Personal Devices

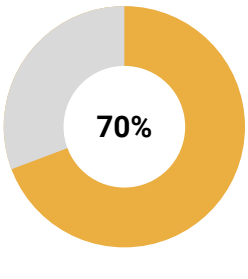
Government vs Private Schools



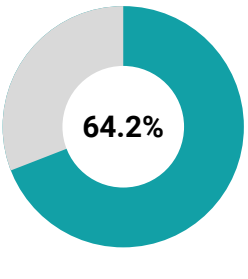
Students show readiness to embrace digital learning and are confident in their capabilities.

- The confidence of 70% of students in using educational apps and software, coupled with 64.2% being open to various digital learning methods, demonstrates a willingness to engage with digital education, provided that accessibility issues are addressed.
- The high motivation (73%) to learn through digital platforms, with 30.7% highly motivated, points towards a growing interest in digital learning, potentially driven by the interactive and engaging nature of digital content.

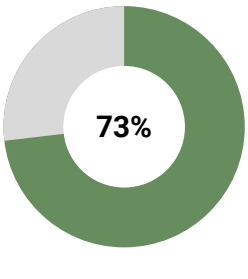
STUDENT DIGITAL LEARNING READINESS



70% of students feel confident in using educational apps and software



64.2% of students are open to various digital learning methods



73% of students are motivated to learn through digital platforms

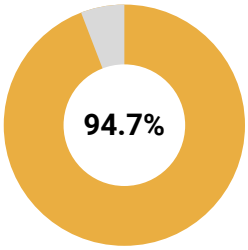
- Government school students, on average, report slightly higher comfort with digital devices and confidence in using educational apps and software compared to private school students. This could be due to various factors, such as specific initiatives in government schools to improve digital literacy.
- Grade 10 students, on average, report higher confidence in using digital resources compared to Grade 9 students.

Students have confidence in their teachers' ability to integrate digital tools into education and are comfortable seeking their support.

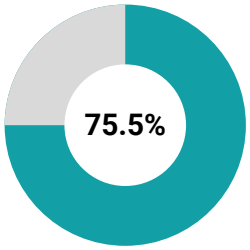
- A high percentage of students (94.7%) expressed confidence in their teachers' ability to use digital education, with 75.52% believing their teachers understand the benefits and challenges of digital education.

- Furthermore, 62.6% of students are comfortable seeking support from teachers while using digital resources and tools for study, indicating a positive student-teacher dynamic in the context of digital learning.

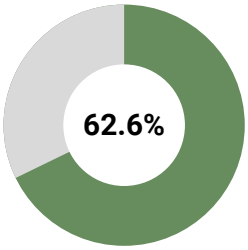
STUDENTS CONFIDENCE IN TEACHERS' DIGITAL COMPETENCE



94.7% of students expressed confidence in their ability to use digital education



75.5 % of students believe their teachers understand the benefits/challenges of digital education



62.6% of students are comfortable seeking support from teachers regarding digital resources.

A notable portion of students have significant commitments outside of school hours, with household chores and tuition being common after-school activities.

- A majority of students, 63.2%, are engaged in household chores after school, indicating that a significant portion of their time outside school is dedicated to family responsibilities.

- Additionally, 21% of students attend tuition after school, suggesting that a considerable number of students seek extra academic support beyond the classroom.

- These after-school commitments may impact students' availability for homework, self-study, and leisure activities, potentially affecting their overall well-being and academic performance.

A2: Unveiling Teachers' Perspectives

This survey of 75 teachers from 14 schools in Kiphire district reveals insights into the integration of digital education. Despite high teacher confidence in using digital tools, challenges remain consistent in implementation. Issues such as limited access to devices, reliance on personal equipment, and poor internet connectivity hinder widespread adoption. While teachers acknowledge the potential of digital education to engage students and enhance understanding, they emphasise the need for training, support, and improved infrastructure to maximise its benefits and prepare students for the digital world.

Respondents

Inclusive Teacher Cohort Analysed:

- The investigation involved 75 teachers from 14 schools within Kiphire district, ensuring a broad perspective on digital education practices.

Diverse Institutional Representation:

- The participant pool comprised teachers from both government (32 or 43%) and private (43 or 57%) schools, reflecting varied experiences and insights into the integration of digital education.

Key Takeaways

- **Growing Use with Potential:** While many teachers actively leverage digital tools, there's room for deeper integration across education, fostering a promising future.
- **Bridging the Digital Divide:** Limited access and reliance on personal devices expose critical areas where improved infrastructure and support for digital access are necessary.
- **Confidence Needs Training:** Teachers' self-reported confidence using digital tools outpaces their formal training, highlighting the need for comprehensive professional development programs.
- **Openness to Engagement:** Widespread comfort with interactive methods like videos and games suggests teachers' receptiveness to incorporating more engaging digital content in the classroom.
- **Support for Success:** Teachers' willingness to embrace digital education alongside existing challenges necessitates targeted support to maximise the benefits of this approach.

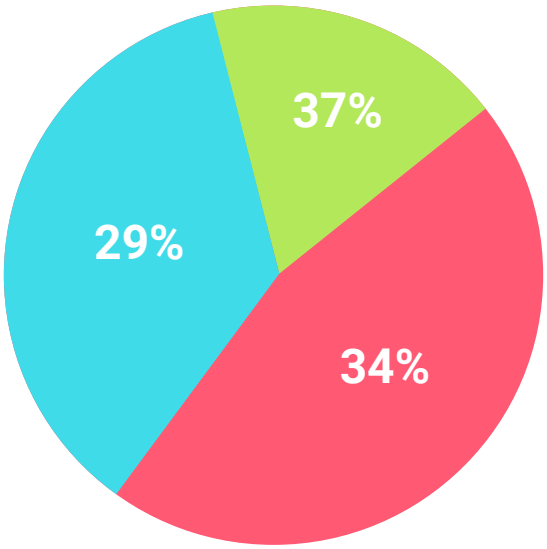
Key Findings

Teachers are increasingly integrating digital technology into their teaching practices, although usage and attitudes vary widely.

- 29% of teachers use an electronic device to teach, and an additional 37% do so sometimes, indicating a significant adoption rate.

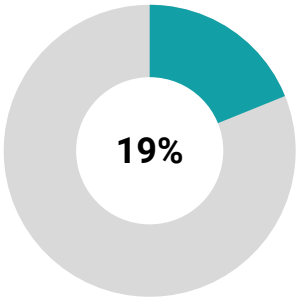
Teacher Electronic Device Usage

- 29% of teachers use electronic device to teach
- 37% of teachers occassionally use electronic devices for teaching
- 34% of teachers do not use or keep usage of electronic devices ta a minimum

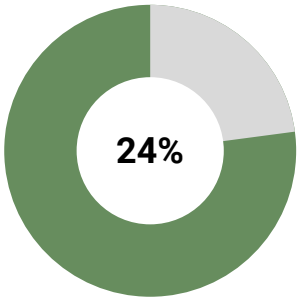


- 19% do not use electronic devices at all, and 24% do not use digital technology to teach, highlighting a segment resistant or unable to adopt digital methods.

TEACHERS NOT USING DIGITAL TECHNOLOGY



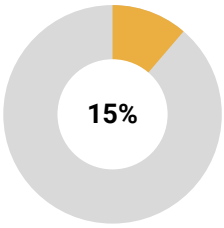
19% of teachers do not use electronic devices



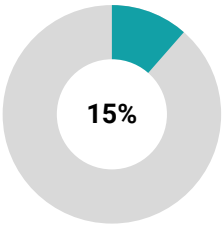
24% of teachers do not use digital technology to teach

- Usage frequency varies, with 15% using digital technology once a month, weekly, and almost every day, respectively, while 29% use it rarely or never.

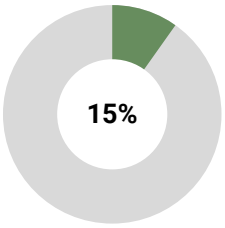
FREQUENCY OF DIGITAL TECHNOLOGY USE



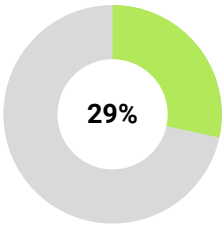
15% of teachers use digital technology about once a month



15% of teachers use digital technology about once a week



15% of teachers use digital technology almost everyday

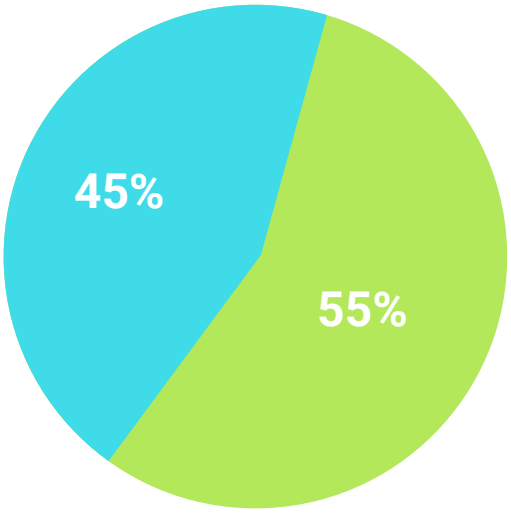


29% of teachers rarely or never use digital technology

- Mobile phones and tablets are utilised by 45% of teachers, indicating a trend towards portable digital solutions.

Teachers Embrace Portable Digital Tools

- 45% of teachers use mobile phones and tablets
- 55% of teachers opt for other devices

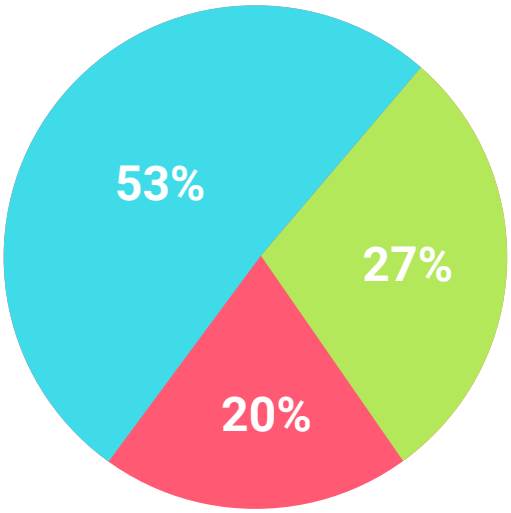


There is a diverse range of devices used for teaching, with personal ownership being common.

- 25% use a mobile phone or tablet, and 16% use a Smart TV or projector, showing a variety of devices in use.
- 16% use both mobile/tablet and Smart TV/projector, indicating some integration of multiple technologies.
- 53% of the devices used are personally owned by the teachers, with only 27% provided by the school.

Device Ownership

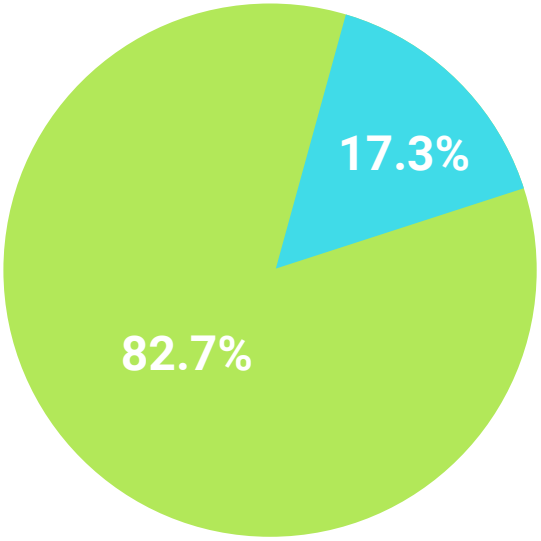
- 53% of devices are personally owned by teachers
- 27% of devices are provided by the school
- Others



Internet connectivity issues and concerns about digital infrastructure pose significant challenges to digital education adoption.

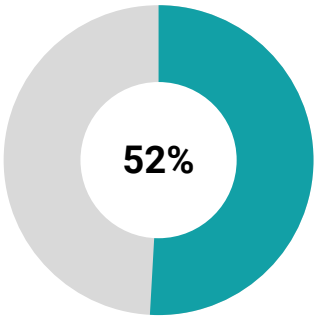
- 4% of teachers lack internet service entirely, and 19% have poor internet service, underscoring infrastructure issues.
- 82.7% are concerned about challenges like internet connectivity and access to devices, emphasising widespread concern over infrastructural barriers.
- Teachers cited key technical issues in implementing digital education, including poor internet connectivity (52%) and a lack of devices (53%), stressing the need for better infrastructure.

Digital Divide Hinders Edtech Adoption

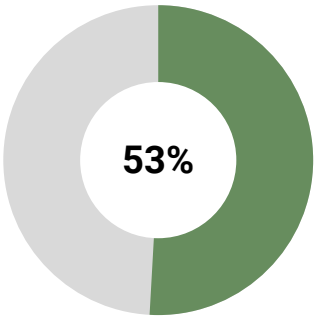


82.7% of teachers are concerned about the lack of internet connectivity and devices

17.3% have maintained a neutral stance



52% of teachers say poor internet hinders digital education

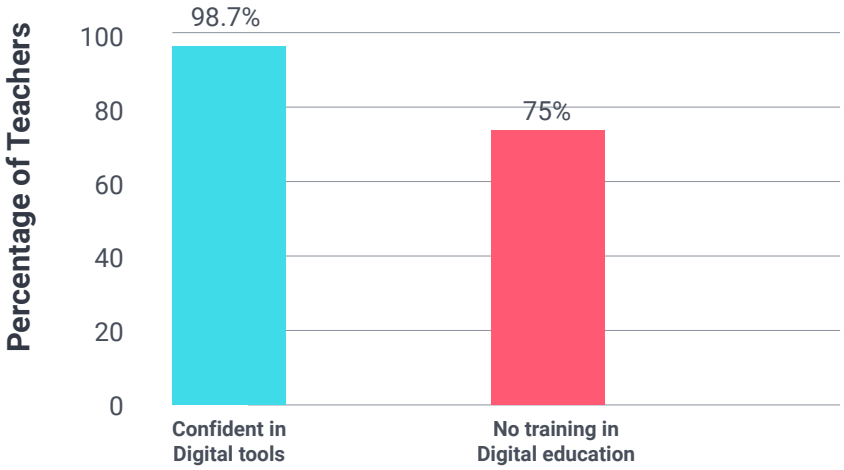


53% of teachers cite lack of devices as a barrier

Teachers hold positive attitudes towards digital education but express a need for more training and resources.

- Nearly all teachers (98.7%) express confidence in using digital technology, demonstrating a positive stance towards digital tools
- 75% of teachers have not received any training in digital education, indicating a gap between confidence and formal training.

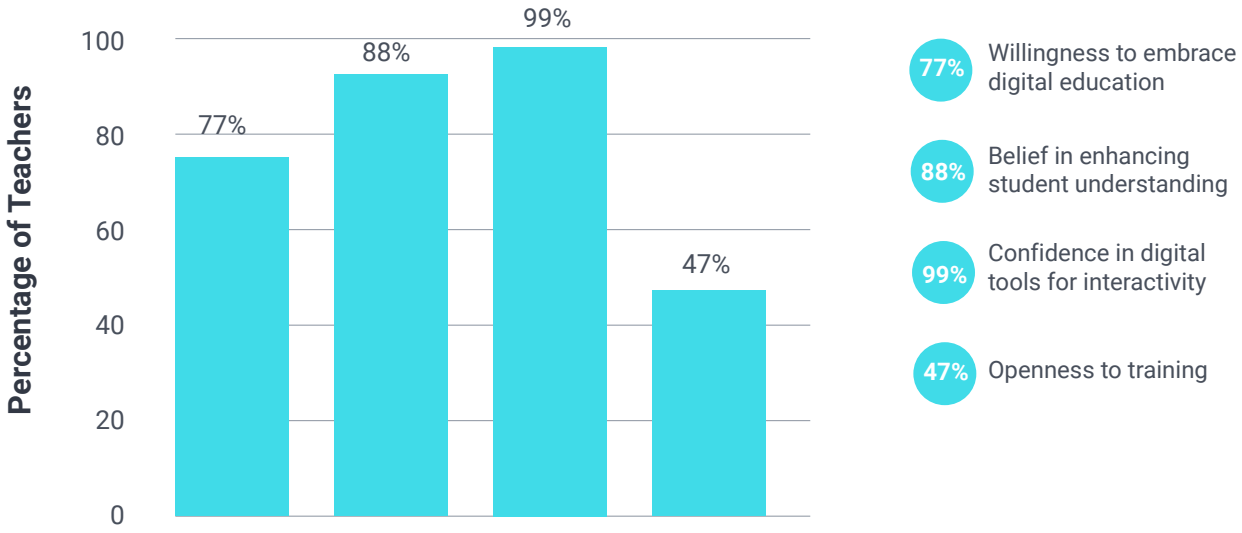
TEACHERS: TECH-READY BUT TRAINING NEEDED



Confidence vs Training among Teachers

- 77.3% of teachers are willing to incorporate digital education, and 88% believe it can enhance student understanding, showing strong belief in its benefits.
- 98.7% agree digital tools can create a more interactive learning environment, yet there is a notable demand for professional development in specific areas such as educational apps and creating engaging content.
- Many teachers (47%) are open to receiving training, with interests ranging from utilising educational apps to creating engaging content and understanding learning management systems.

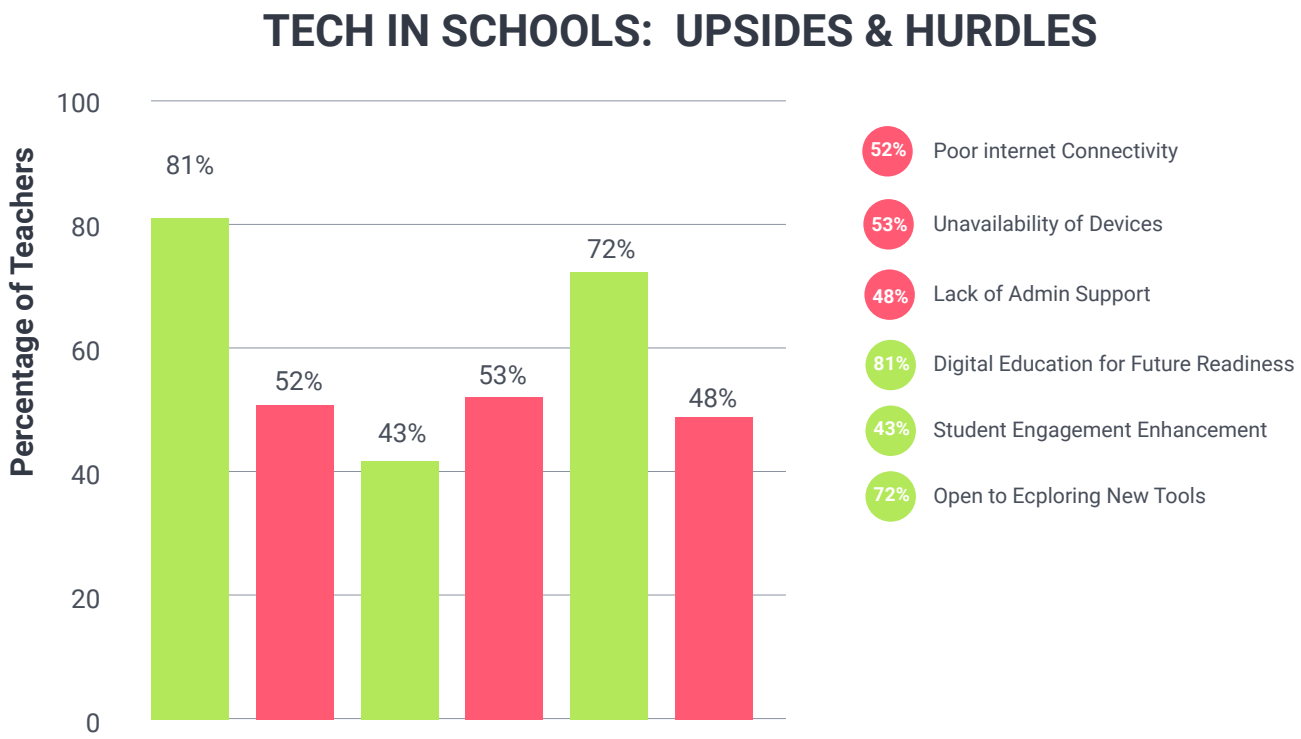
EMBRACING DIGITAL EDUCATION: INCREASING DEMAND



Positive Attitude towards Digital Education

Digital education is recognized for its potential to engage students and prepare them for future challenges, but practical implementation issues remain.

- 81.33% of teachers agree that digital education can prepare students for digital world challenges, and 43% believe it significantly enhances student engagement, reflecting its perceived strategic importance.
- Key challenges cited include poor internet connectivity (52%), unavailability of devices (30.7% and 53.3%), and lack of administrative support (48%), indicating barriers to broader digital education adoption.
- Despite challenges, 72% are open to exploring new digital tools, suggesting an ongoing interest in integrating digital innovations into teaching practices.

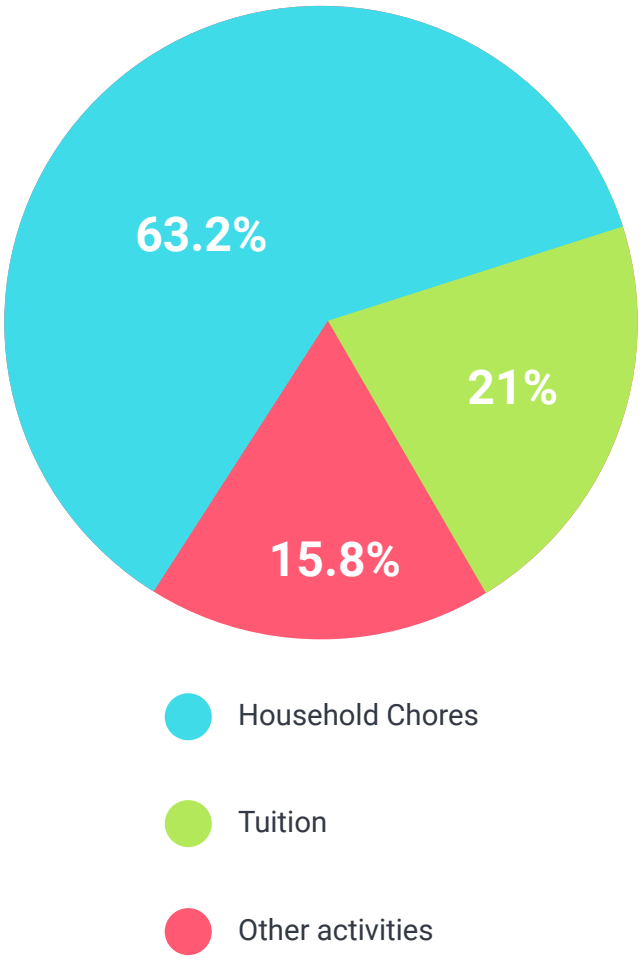


Positive Attitude towards Digital Education vs Challenges

This survey unveils a promising scenario: teachers are embracing digital tools in education, recognizing their potential to enhance learning. However, significant hurdles remain. Limited internet access and reliance on personal devices expose a critical "digital divide" that needs to be addressed to ensure all students have equal access to digital learning opportunities.

Furthermore, a gap exists between teachers' confidence in using these tools and their actual training. This highlights the urgent need for comprehensive professional development programs. The solution lies in a two-pronged approach: improving digital infrastructure alongside robust teacher training and support. By effectively tackling these crucial areas, the education system can unlock the full potential of digital technology, enriching both teaching and learning. This will equip students with the necessary skills to thrive in the increasingly digital world.

Student After-School Activities



Digital learning holds great promise for students, as they see its potential benefits. However, there's a significant digital divide, with many students lacking access to devices and the internet. Teacher training is crucial for effective digital education. While students are confident in their teachers' ability to integrate digital tools into education, they emphasise the need for well-trained educators. Finally, students have significant commitments outside of school hours, which may impact their availability for digital learning. Addressing these challenges is crucial for harnessing the full potential of digital education.

A3: Discovering the Landscape of School Technology and Infrastructure

This survey of 15 schools in Kiphire district reveals insights into real data of school profiles, digital infrastructure, training, and experiences and perspectives on digital education, along with the challenges encountered in this area. It also highlights the varying degrees of digital infrastructure and training initiatives, revealing both strengths and areas for improvement. Despite challenges like limited access to devices and internet connectivity, there's a notable commitment to leveraging technology for educational enrichment. The survey underscores the importance of equitable access to digital resources for fostering an inclusive learning environment.

Respondents

Inclusive School Staff Surveyed:

- The survey included administrators from 15 schools in Kiphire district, ensuring a comprehensive representation of educational perspectives.

Varied Institutional Representation:

- Participation encompassed both government and private school administrators, with 60% representing government institutions and 40% private educational establishments.

Key Takeaways

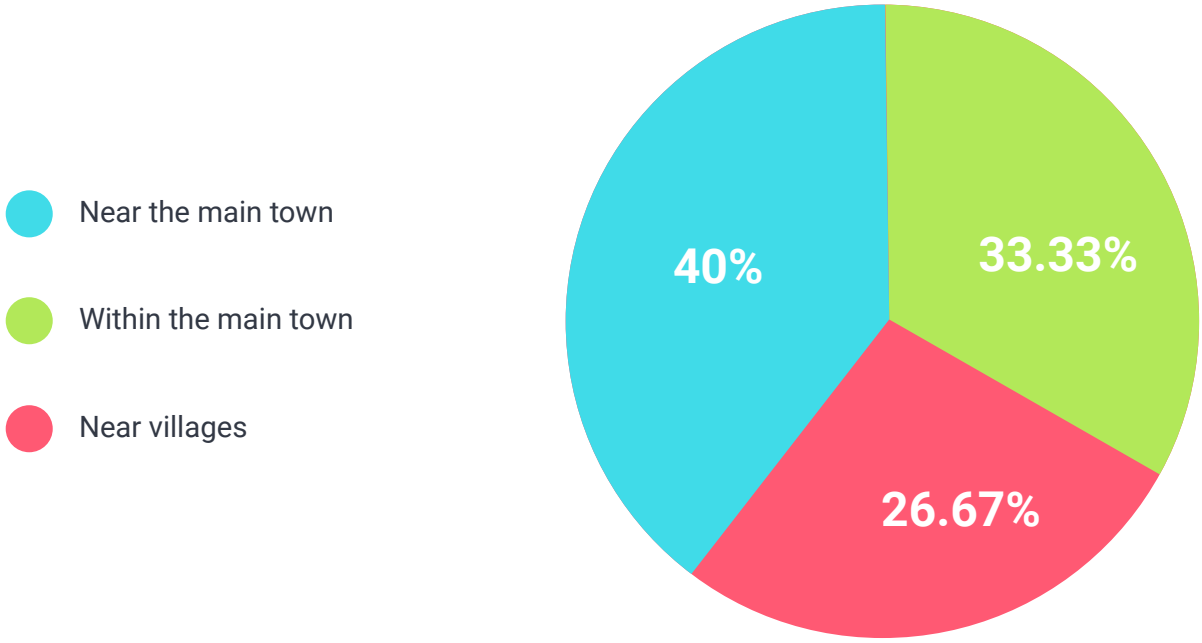
- **Promising future for Digital Education:** The growing use of digital tools, despite limitations, suggests a promising future for technology-enhanced learning.
- **Bridging the Digital Divide:** The shortage of devices and unreliable internet connectivity hinders the effectiveness of current technology. Schools need to bridge this digital divide to empower learning.
- **Powering Up Learning:** While schools are enthusiastic about using digital resources, obstacles like limited infrastructure and unreliable power must be tackled for successful implementation.
- **Closing the Digital Learning Gap:** Closing the digital learning gap requires an approach, encompassing targeted teacher training, and leveraging existing openness to technology.

Key Findings

Kiphire schools, across towns and villages, vary in structure and show disparity in school infrastructure.

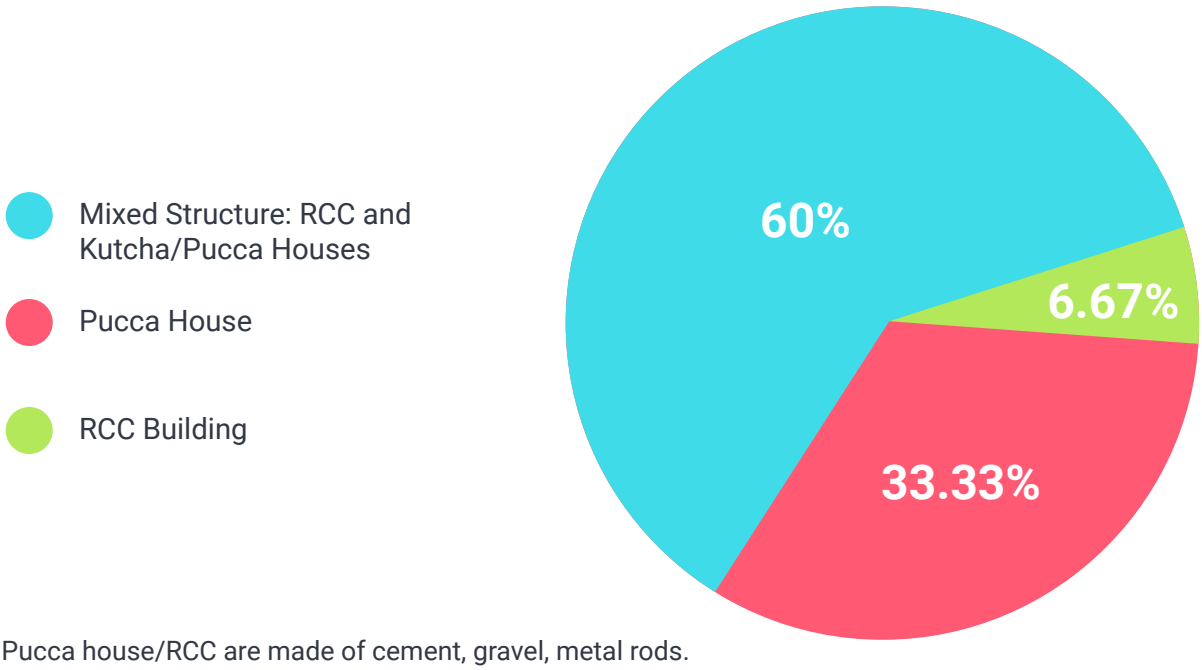
- 40% of schools are situated in the proximity of the main town, 33.33% within the main town and 26.67% of schools near villages.

Location of Schools



- Most Kiphire schools (60%) have a mix of permanent (RCC) and semi-permanent (Kutcha/Pucca) buildings, with a smaller portion being fully permanent (RCC) or well-built (Pucca), 6.67% and 33.33% respectively.

Type of School Structure

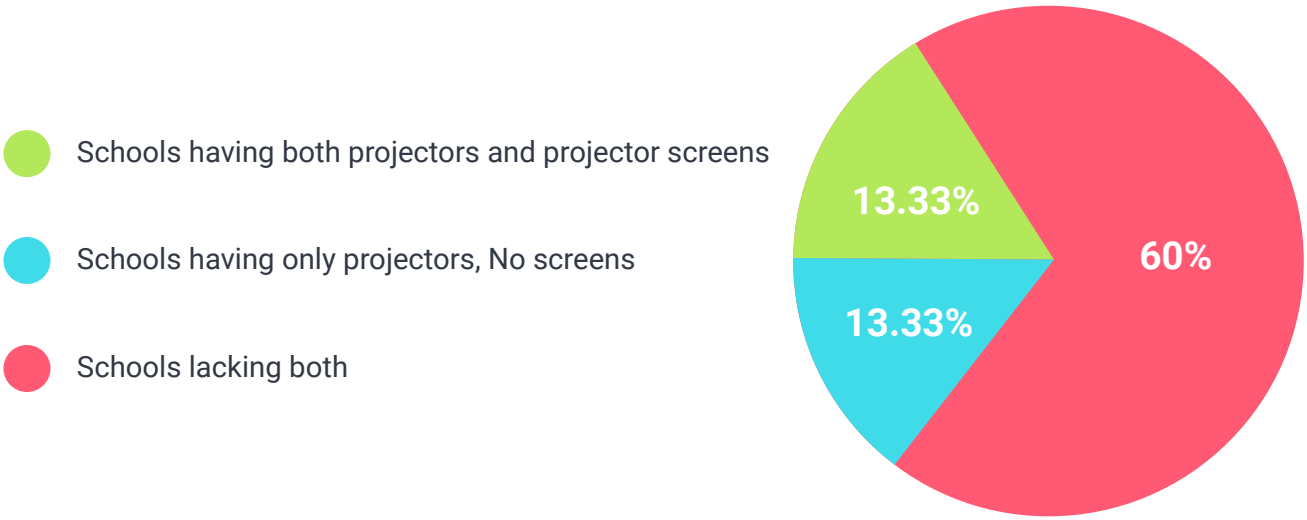


Note: Pucca house/RCC are made of cement, gravel, metal rods.
Kutcha houses are structures made of mud , straws, bamboo.

- While 60% of schools report classrooms equipped with lighting and plug points, 20% experience unreliable power supply, hindering the use of technology. Additionally, 13% of schools lack these facilities entirely.

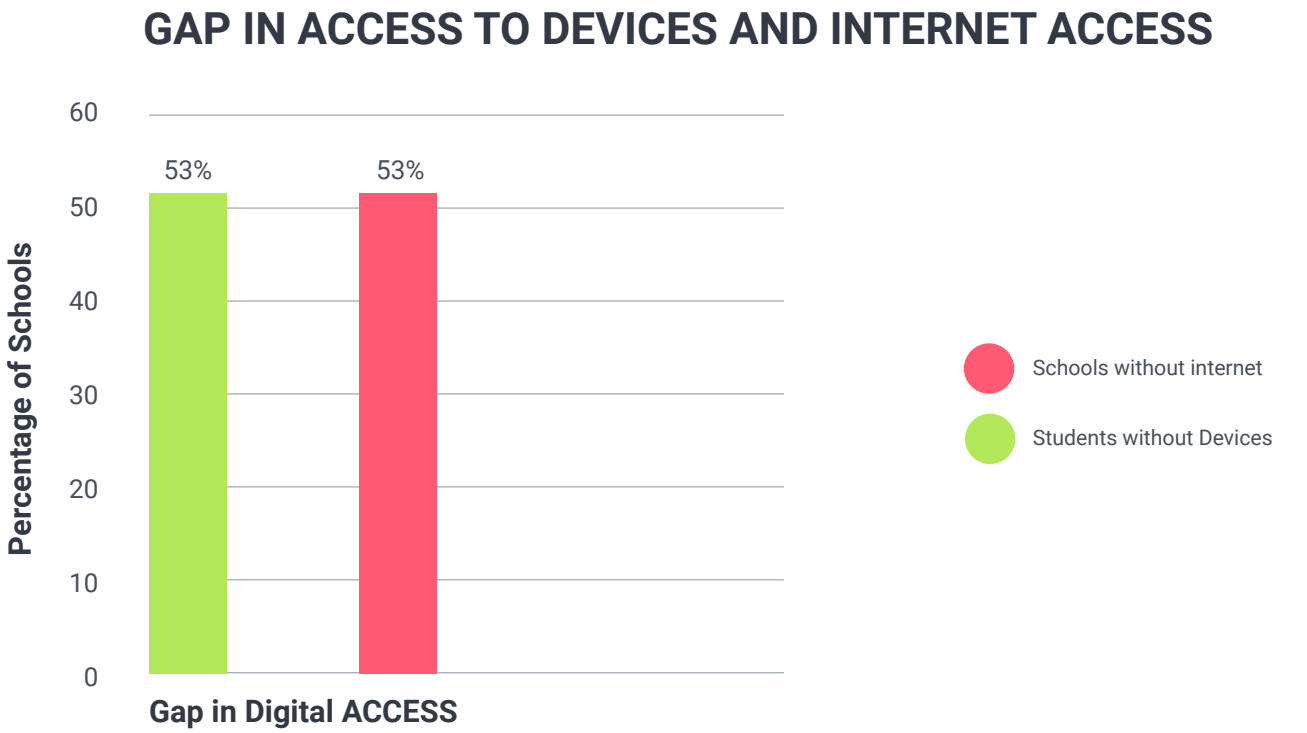
- Only 13.33% of Kiphire schools have both projectors and screens, while another 13.33% have projectors alone and 60% lack both.

Projector Access in Kiphire Schools



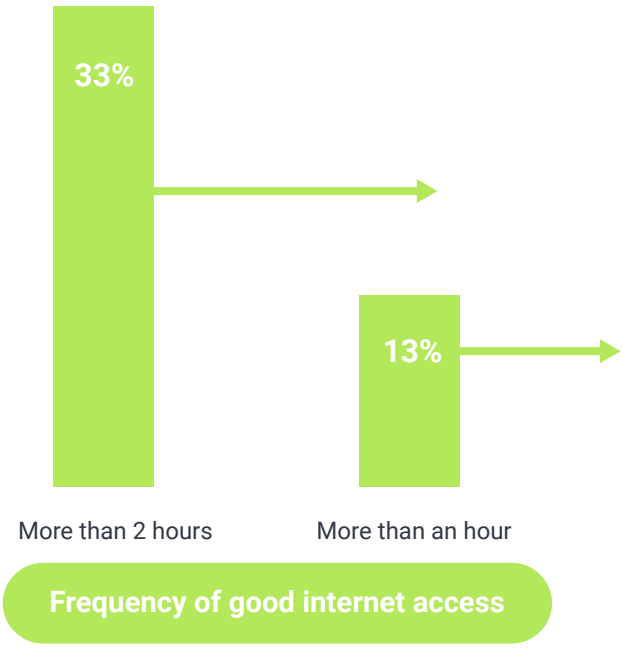
A significant digital divide exposes unequal access to devices and internet connectivity which hinders learning among students.

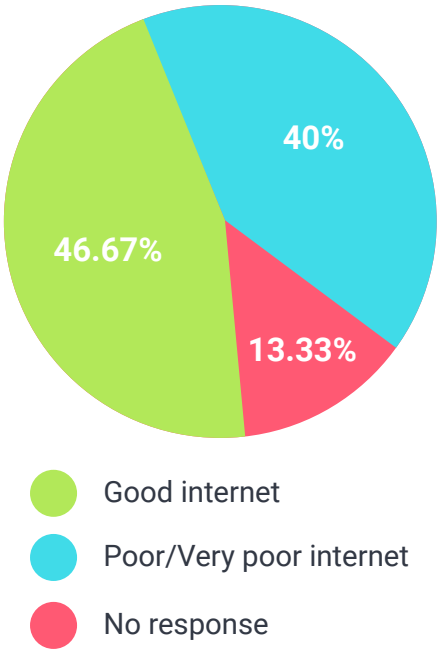
- A significant digital divide exists, with over half (53.33%) of schools saying their students lack personal devices and a similar proportion of schools (53.33%) lacking internet connectivity.



- 26.67% have access to family devices, and only 20% have phones, which may have limitations for learning.
- Even with the internet, quality is a major concern: good internet exists in 46.67% of schools, whereas a significant portion (40%) experiences poor or very poor connectivity. This limits the types of online learning activities students can engage in.
- Reliable internet access for more than 2 hours a day exists in only 33.33% of schools while 13.33% have good internet access for more than an hour, hindering the full potential of online learning.

CHALLENGES IN SCHOOL DIGITAL ACCESS AND CONNECTIVITY



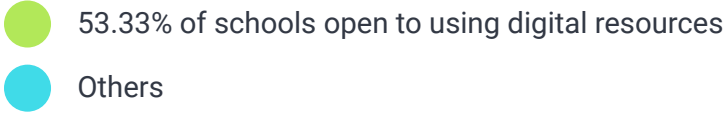


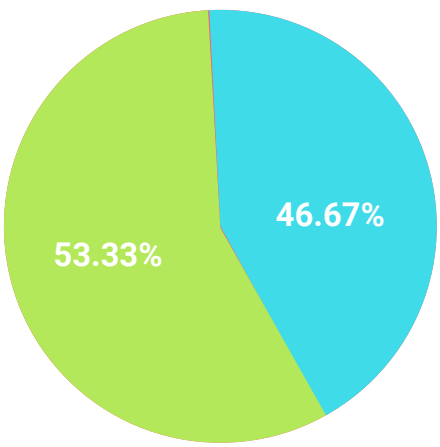
- More than half of schools (53.33%) express interest in utilising digital resources such as videos and quizzes, but the digital divide hampers their effective integration.

There is a positive outlook towards the effectiveness of digital education and openness to utilising digital resources in teaching methodology.

- A majority of schools (53%) express openness to using digital resources like videos, quizzes, and games. This indicates a willingness to embrace technology for learning.

Schools Open to Digital Learning Tools

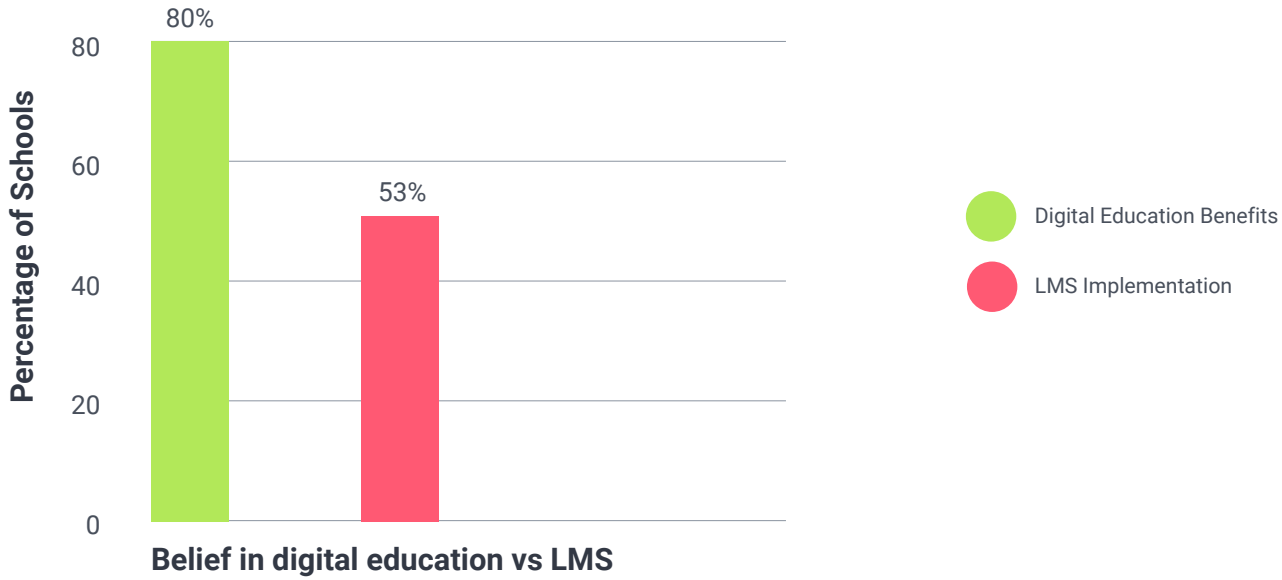




- Interestingly, 80% of schools report confidence in their teachers' ability to utilise digital tools effectively. This suggests a perceived positive outlook on teacher preparedness

- Although 80% of schools strongly believe in the overall benefits of digital education, only approximately 53.33% express optimism regarding the potential benefits of implementing a Learning Management System (LMS). Conducting workshops or sharing success stories to explore the benefits of LMS could help address this gap and unlock the full potential of digital learning.

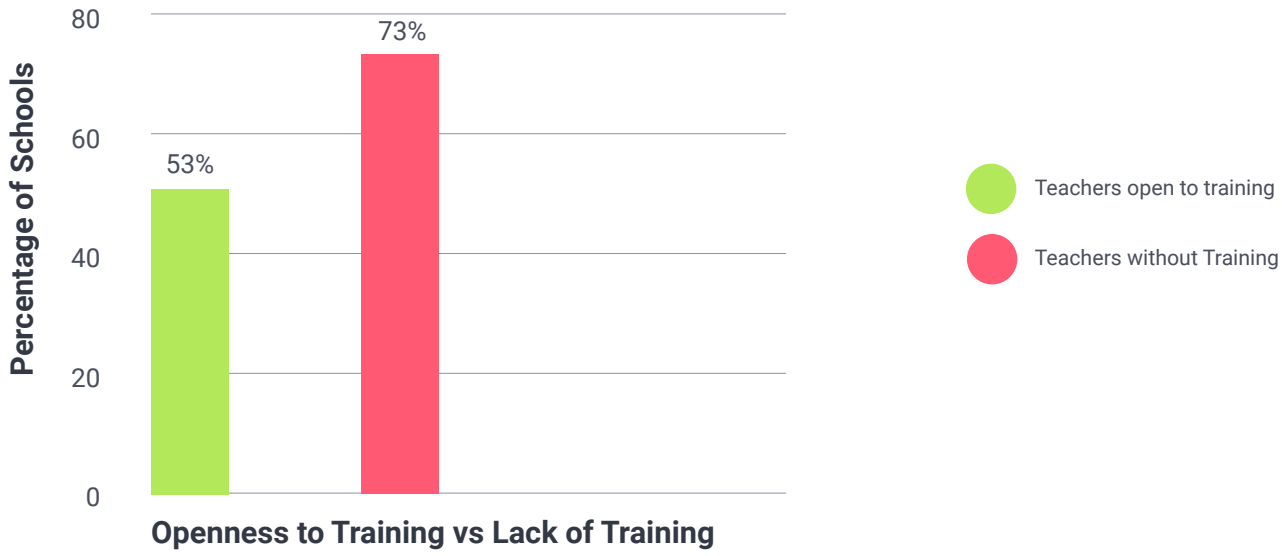
DIGITAL LEARNING VISION VS.LMS IMPLEMENTATION



Enthusiasm for digital learning in schools is hindered by a significant teacher training gap and resource constraints, including limited devices.

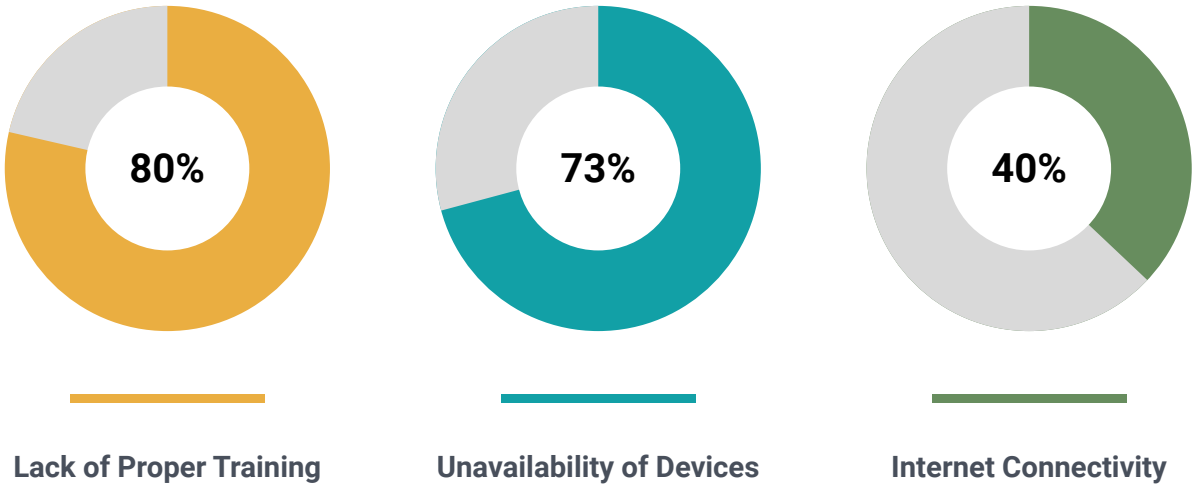
- While 53.33% of schools indicated teacher openness to training, roughly 73% of teachers haven't received specific digital learning training. This highlights a potential gap between teacher enthusiasm and available training opportunities.

ENTHUSIASM FOR DIGITAL LEARNING OUTPACES TRAINING



- Schools report that the majority of teachers (73%) lack specific digital learning training, though alternative training programs exist (26.7%).
- 80% of schools are concerned about challenges like lack of proper training in digital education as barriers to integrating technology into teaching.
- Schools identify resource constraints like the unavailability of devices (73%) and internet connectivity (40%) to pose significant challenges to utilising technology in their classrooms.

BARRIERS TO INTEGRATING TECHNOLOGY



- While a significant portion (69%) of teachers haven't received specific training in digital learning, there are various training initiatives implemented by schools. These include Faculty Development Programs, Educational Block Resource Centre (EBRC) training, and Foundational Literacy and Numeracy training. This highlights that schools are exploring different avenues to address the teacher training gap.

Table 1. Overview of Devices in Schools

School	No. of Computers	No. of Laptops	No. of Smart TVs	No. of UPS	No. of Tablets issued to Students	No.of Tablets issued to Teachers	Devices issued to teachers other than Tablets
GHS Amahator	3	0	3	2	17	0	Nil
Agape Hr. Secondary School	0				Nil	0	Nil
Saramati High School	13	7 Laptops	0	6	Nil	0	No
GHS Yangphi	3	1	2	2	Nil	13	Pre-installed pen drive for classes 8, 9 & 10
Loyola Hr. Sec School	33	0	1	6	Nil	0	Nil
Trinity High School	7	5	2		Nil	Nil	Nil
GHSS Kiphire	10	0	2	10	100 Tablets but not issued to students	1 each Teacher	No.
GHS Phelungre	5	0	3	3	21	NIL	NIL
GHS Salomi	1		2	1	40 tablets were issued to students in 2021.	Not issued	
Mount Horeb High School	6	0	0	6	Nil	None	No
EL Beth High School	1	1	0	0	0	0	0
GHS Sitimi	7	1	3	9	38	Nil	
GHS Phuvikiu	0	0	2	2	None in working condition	No	Smart TVs 1 Computer, 1 Projector
GHSS Pungro	2	0	2	2	0	0	0
GHS Longmatra	5	0	2	1	0	0	No

Table 2. Devices in Working Condition

School	No. of computers in working condition	No. of laptops in working condition	No. of Smart TVs in working condition	No. of UPS in working condition	No. of tablets per category	No. of accessible tablets in working condition	No. of accessible tablets in working condition for teachers
GHS Amahator	1	0	3	2	Class 8	0	Nil
Agape Hr. Secondary School	0	0	0		0	0	Nil
Saramati High School	7 Laptops, 4 Desktops	7	0	6	0	0	Nil
GHS Yangphi	3	1	2	2	0	0	13
Loyola Hr. Sec School	33	0	1	6	0	0	Nil
Trinity High School	7	5	2		0	Nil	Nil
GHSS Kiphire	10	0	2	10	Sufficient tablets not issued.	Kept in the office.	Not checked.
GHS Phelungre	1	0	3	3	1 Tablet per student issued to class 8, 9, 10.	18	NIL
GHS Salomi	1	0	2	1	1 Tablet per student issued to class 8, 9, 10.	Not in working condition	
Mount Horeb High School	6	0	0	6		None	None
EL Beth High School	1	1	0	0	0	0	0
GHS Sitimi	2	1	3	3	18 for C- 9, 7 for C- 10, 12 for C- 7	10	
GHS Phuvikiu	1	0	2	2	Not sure	Not Sure	No
GHSS Pungro	2	0	0	2	0	0	0
GHS Longmatra	1	0	2	1	1 Tablet per student issued to Grade 8, 9 10 students	0	0

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