SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

A STUDY OF SAMAGRA SHIKSHA: AN INITIATIVE TO ENHANCE DIGITAL EDUCATION WITHIN MAMIT DISTRICT OF MIZORAM

Ethelyne Lalrinzuali[1], Dr. F. Lalrinzuali[2]
[1]Research Scholar, Dept of Education, Mizoram University
[2]Assistant Professor, Dept. of Education, Mizoram University

Article DOI: https://doi.org/10.36713/epra27613
DOI No: 10.36713/epra27613

ABSTRACT

Digitization of education serves as a vital mechanism for nations, acting as a catalyst in achieving the objectives of quality and inclusive education. Recognising its importance, the Government of India, through the Ministry of Human Resource Development, incorporated digital initiatives as a key component under the integrated scheme of Samagra Shiksha. The present study seeks to assess the extent to which Samagra Shiksha has accomplished its digitization objectives since it was implemented in Mamit District of Mizoram. It further aims to identify the challenges encountered during implementation and to examine the level of awareness among teachers and principals towards digitisations. A descriptive survey method was adopted, and data were gathered from 56 teachers and 28 principals representing primary, upper primary, secondary and higher secondary schools. The results of the study revealed that the scheme's plan is being effectively implemented in achieving the goal of digitisation in the district. However, issues such as weak internet connectivity, unreliable power supply, insufficient infrastructure, and limited teacher training on digital tools remain major constraints. The study concludes that Samagra Shiksha plays a crucial role in promoting and strengthening digital education in the district. Recommendations are proposed in alignment with the National Education Policy (NEP).

KEYWORDS: *Digital Education, Inclusive Education, Samagra Shiksha, NEP 2020.*

INTRODUCTION

The development of technology has enormous impact on education in the 21st century, making digital education essential to attain inclusive and quality learning for all. Acknowledging this need, the Government of India introduced the Samagra Shiksha scheme in 2018 as a comprehensive school education programme that spans from pre-primary to senior secondary. The scheme aims to ensure holistic improvement in the quality of education through the integration of various initiatives, one of which is the promotion of digital education.

Digital education under Samagra Shiksha emphasizes the application of Information and Communication Technology (ICT), smart classroom, digital learning materials, and online teacher training platforms such as DIKSHA and NISHTHA. These initiatives are designed to enhance teaching and learning by making them more engaging, interactive, and accessible, particularly in remote and rural areas.

In the context of Mamit district in Mizoram, the implementation of digital education assumes particular importance due to the district's geographical remoteness, infrastructure limitations and socio-economic constraints. Digital initiatives under Samagra Shiksha have the potential to overcome these challenges by making education more accessible, interactive and learner-centred. However, the success of such initiatives depends on several factors, including infrastructure availability, teacher preparedness, digital literacy and administrative support. Hence, the present study aims to assess the extent to which digital education objectives of Samagra shiksha have been realized in the district. The study also seeks to identify the level of awareness, utilization, and satisfaction among teachers and school headmasters/principals regarding digital initiatives, along with the major challenges faced in their implementation.

REVIEW OF LITERATURE

Sharma (2021) assessed how ICT tools have influenced teaching practices across India, concluding that digital learning fosters interactive and flexible classrooms when implemented effectively. Yet, the success largely depends on adequate training, motivation, and institutional support. This observation reinforces the current study's implication that infrastructural readiness must be complemented by teacher empowerment and administrative support under Samagra Shiksha.

According to the Ministry of Education (2021), the India Report on Digital Education documented multiple digital initiatives such as DIKSHA, SWAYAM Prabha, and NISHTHA as key pillars of Samagra Shiksha. The report emphasized equitable access to quality education through digital means, especially during the COVID-19 pandemic. However, disparities persist between urban

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

and rural schools in terms of infrastructure and teacher readiness. The present study corroborates these insights, highlighting that Mamit District schools have yet to achieve full digital inclusivity.

Kanvaria and Dubey (2022) explored school teachers' perceptions of continuous professional development (CPD) through digital platforms like DIKSHA and NISHTHA. The research found that teachers valued these platforms for improving teaching strategies and student engagement, but technical challenges and limited internet access often hindered participation. This closely mirrors the responses from Mamit teachers who reported partial sufficiency of ICT tools and sporadic internet reliability under Samagra Shiksha.

Ghosh (2023) highlighted that the inclusion of Information and Communication Technology (ICT) in India's education system has significantly reshaped teaching and learning processes. The study noted that digital platforms such as DIKSHA, SWAYAM, and e-Pathshala have enhanced accessibility to learning materials and teacher training. However, infrastructural and connectivity limitations remain major barriers in rural and remote areas. This aligns with the present study's findings that schools in Mizoram still face challenges of inadequate digital resources and unreliable internet connectivity under Samagra Shiksha.

Behera (2024) examined the effectiveness of NISHTHA (4.0) training implemented through the DIKSHA portal in enhancing teachers' professional development in Odisha. The findings revealed that while most teachers became more confident in integrating digital tools, some struggled with limited technological literacy. This supports the current study's observation that although digital resources are available under Samagra Shiksha, continuous training and follow-up support for teachers are crucial for sustainability. Singh and Bhavdev (2024) and Shruthi et al. (2021) both emphasized that the digital divide between urban and rural India continues to restrict the effectiveness of national education initiatives. Their studies identified weak infrastructure, inconsistent electricity supply, and poor internet connectivity as persistent issues. Similarly, the findings of the current research in Mamit District indicate that insufficient ICT infrastructure and unreliable networks remain the most significant constraints in implementing digital education.

RATIONALE OF THE STUDY

The rapid expansion of digital technology has created new opportunities for improving teaching-learning processes. In India, the Samagra Shiksha scheme aims to strengthen school education by promoting ICT integration, digital platforms and capacity-building programmes for teachers. Initiatives such as NISHTHA, DIKSHA and SWAYAM have been introduced to enhance digital competency and pedagogical skills. However, the success of these initiatives largely depends on how effectively they are implemented at the school level by teachers and headmasters.

In this context, it becomes crucial to examine the ground realities of digital education implementation in schools. Understanding the extent of digital platform usage, the adequacy of teacher training, the availability of ICT infrastructure and the challenges experienced by both teachers and school leaders will provide valuable insights into the effectiveness of Samagra Shiksha initiatives. Such an investigation is needed not only to identify existing gaps but also to guide policy improvements and strengthen digital learning environments in school.

This study is therefore significant as it provides empirical evidence on the actual conditions of digital education at the school level. The findings will help policy makers, school administrators and educational planners develop targeted strategies to enhance teacher capacity, improve infrastructure and ensure meaningful integration of digital tools in teaching. By identifying both strengths and limitations of current practices, the study will contributes to improve the quality and sustainability of digital education.

RESEARCH QUESTIONS

1. How effectively are digital education initiatives under Samagra Shiksha being implemented in Mamit district?
2. To what extent do teachers and principals/headmasters use digital learning platforms such as NISHTHA, SWAYAM and DIKSHA?
3. How adequate and effective are the training programmes provided under Samagra Shiksha including NISHTHA, DIKSHA and digital education trainings?
4. What is the current status of ICT infrastructure in schools and how does it influence the implementation of digital learning?
5. What is the level of teacher satisfaction regarding the integration of digital learning tools in the teaching-learning process?
6. What challenges do teachers and principals/headmasters face in implementing digital education and applying the training learning's in their school?

OBJECTIVES OF THE STUDY

1. To examine the overall implementation and effectiveness of digital education initiatives under the Samagra Shiksha scheme in Mamit district, Mizoram.
2. To assess the extent of usage of digital learning platforms such as NISHTHA, SWAYAM and DIKSHA by teachers and principals/headmasters.

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

3. To evaluate the adequacy and effectiveness of training programmes provided under Samagra Shiksha including NISHTHA, DIKSHA and digital education trainings.
4. To analyse the availability, accessibility and condition of ICT infrastructure in schools and its influence on digital learning.
5. To determine the level of teacher satisfaction regarding the integration of digital learning tools in the teaching-learning process.
6. To identify the major challenges encountered by teachers and headmasters in implementing digital education and applying training learning's.
7. To suggest appropriate measures and strategies for improving the implementation and effectiveness of digital education initiatives in the district.

METHODOLOGY OF THE STUDY

Method: The study adopted the descriptive survey method.
Population and sample size of the study: The population of the study consists of all primary, upper primary, secondary and higher secondary schools in Mamit district.

The samples were taken from 56 teachers (2 teachers from each school) and 28 Headmasters/Principals of government schools and Samagra Shiksha schools.

Sample

	PS	UPS	HS	HSS	Total
Teachers	24	16	10	6	56
Headmaster/Principal	12	8	5	3	28

Sampling techniques used: Stratified random sampling was employed to select the sample.
Tools used: Questionnaires for Principals/ Headmasters and teachers developed by the researcher were used for data collection.

DATA ANALYSIS AND INTERPRETATION

Table-1: Responses of school Headmasters/ Principals

Sl	Questions	Options/Responses	Frequency	Percentage
1	What digital tools or platforms are most commonly used?	DIKSHA e-pathshala SWAYAM UDISE Other(Please specify)	28 0 0 28 VSK	100% 100%
2 d	Do you receive support for school digitization under SS?	Yes No	16 12	57% 42%
2	What kinds of support for school digitization under Samagra?	Tablet, Digital board, Computer		
3	How sufficient is the ICT infrastructure in your school?	Fully sufficient Partially sufficient Insufficient	0 6 22	0 21% 79%
4	Does your school have reliable internet connectivity for digital learning?	Available in all classrooms Available in some classrooms Available but unreliable Not available at all	0 8 1 19	 29% 4% 67%
5	Main challenges faced in implementing digital initiatives.	Lack of adequate infrastructure Insufficient teacher training on digital tools Limited funding for digital projects Resistance to change among staff Unreliable electricity and connectivity		
6	Have you attended any Diksha training sessions?	Yes, I have completed multiple sessions. Yes, I have attended a few sessions. No, I have not attended any	14 8 6	50% 29% 21%
7	Have you attended NISHTHA training?	Yes No	15 13	54% 46%

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

8	Which areas of NISHTHA training have been most beneficial to you?	Pedagogical approaches and subject-specific training, classroom management and student engagement, leadership and school governance.		
9	How frequently do teachers in your school apply the training concepts learned from NISHTHA?	Regularly in daily teaching Occasionally when needed Not at all	28	100%
10	What challenges do you face in implementing learning from NISHTHA training?	Lack of time due to administrative workload, inadequate resources and infrastructure, need for refresher training and follow-up support.		

The analysis of responses from 28 principals/ headmasters shows that the use of digital platforms such as DIKSHA, UDISE and VSK is universal across schools in Mamit district. However, despite widespread use of digital platforms, 79% of the respondents reported insufficient ICT infrastructure, and 67% indicated the absence of reliable internet connectivity, highlighting a severe digital device.

Support under the Samagra Shiksha scheme was received by only 57% of the schools, suggesting inconsistent implementation. Training participation was moderate with 50% completing multiple DIKSHA sessions and 54% attending NISHTHA training. However, the application of NISHTHA concepts in daily teaching remains limited with 100% of respondents applying them only occasionally.

Major challenges identified include inadequate infrastructure, lack of teacher training, limited funding, unreliable electricity and sufficient follow-up support. These findings indicate that while digital initiatives have been introduced, significant structural and resource-based barriers hinder their effective implementation.

Table-2: Responses of teachers.

Sl	Questions	Options/Responses	Frequency	Percentage
1	How frequently do you use NISHTHA and SWAYAM?	Daily A few times a week Never	0 27 29	 48% 52%
2	Is there any extra assigned for students to enhance their IT skills?	Yes No	6 50	11% 89%
3	Have you received any formal training on implementing digital education in schools under SS?	Yes, multiple times Yes, but only once No, I have not received any training.	10 8 38	17% 15% 69%
4	What additional support is needed to improve the effectiveness of digitization in your school?	More funding for ICT infrastructure, better teacher training programmes, strong internet connectivity, regular monitoring and feedback.		
5	How satisfied are you with the integration of digital learning tools under SS?	Very satisfied Satisfied Dissatisfied	0 26 30	 46% 54%
6	Have you attended any DIKSHA training sessions?	Yes No	28 28	50% 50%
7	Effectiveness of NISHTHA training	Very effective Somewhat effective Not effective at all	0 40 16	 71% 29%
8	Which areas of NISHTHA training have been most beneficial for you?	Inclusive education strategies, classroom management and student engagement, leadership and school governance.		
9	Challenges faced in implementing learning from NISHTHA.	Lack of time due to administrative workload, inadequate resources and infrastructure, need for refresher training and follow-up support.		

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

The data presented in Table 2 provides insight into teachers' perceptions and experiences regarding the implementation of digital education and training under the Samagra Shiksha scheme. 57% of the teacher reported that they never use NISHTHA and SWAYAM while 48% used them only a few times a week indicating limited involvement in digital professional development activities.

Similarly, efforts to enhance students' IT skills appear minimal as only 11% of teachers assigned extra activities to improve these IT skills whereas 89% did not provide any additional opportunities. Thus trend is further reflected in the lack of training received by teachers on implementing digital education with 69% reported that they had not undergone any formal training. Only a small proportion had attended training once (15%) or multiple times (17%) suggesting gaps in capacity-building initiatives.

Teachers also identified several areas requiring additional support for improving digitization in schools. These include increased funding for ICT infrastructure, improved teacher training programmes, better internet connectivity and consistent monitoring and feedback mechanisms. These needs are closely linked to their satisfaction levels with digital learning integration. 54% expressed dissatisfaction and none reported being very satisfied indicating that current digital integration efforts are not meeting expectations. Participation in DIKSHA training was evenly split with 50% having attended and 50% not, reflecting moderate outreach. Regarding the effectiveness of NISHTHA training, 71% found it only somewhat effective while 29% considered it ineffective and none rated it as very effective.

In terms of benefits, teachers acknowledged that NISHTHA training contributed positively to areas such as inclusive education, classroom management, student engagement, leadership and school governance. However, several challenges hindered the implementation of learning from NISHTHA including lack of time due to administrative workload, insufficient resources and infrastructure and the need for refresher training and follow-up support.

FINDINGS AND DISCUSSION

The data collected reflect the current status of digital infrastructure, support, and challenges faced by schools in the Mamit district.

1. Use of Digital Tools and Platforms

The findings reveal that DIKSHA, UDISE, and VSK are the most widely used digital platforms across schools, each being reported by 100% of the respondents. In contrast, other platforms such as e-Pathshala and SWAYAM were not used at all. This suggests that while certain government-supported platforms are well integrated into school functioning, awareness and utilization of alternative learning platforms remain limited. This suggests that although digital platforms are available, regular engagement is limited across schools. Similar findings were reported by Shokeen and Kaur (2025) in their study on teachers' perception of the DIKSHA platform, where teachers indicated limited familiarity, irregular usage, and accessibility challenges despite recognizing the usefulness of the platform. Furthermore, Banerjee and Biswas (2025) observed that althoufgh DIKSHA and SWAYAM have expanded access to digital learning and teacher training, awarwness and effective utilization continue to vary significantly across regions, especially in rural and remote areas.

2. Training and Capacity building

Most teachers (69%) have not received any formal training on implementing digital education under Samagra Shiksha. Participation in DIKSHA trainings is evenly split with only 50% having attended. Headmasters/Principals also reported that teachers need more frequent, effective and practical training to fully utilize digital tools. Overall, the training components under Samagra Shiksha appear to be underutilized and existing training does not fully meet the needs of educators.

3. Effectiveness of training programmes

Teachers expressed mixed perceptions about the effectiveness of NISHTHA training. No teachers rated it "very effective". Headmasters/ Principals similarly indicated that while trainings introduced useful concepts (inclusive education, classroom management, student engagement), practical implementation remains limited. This highlights the need for more hands-on, follow-up and context specific capacity development. Similarly, Swargiary and Roy (2024) highlighted that teacher training programmes under Samagra Shiksha often lack consistency, contextual relevance, and adequate follow-up support, thereby limiting effective classroom implementation.

4. Digital infrastructure and resources availability

Teachers strongly emphasized the need for better funding, improved internet connectivity and more digital devices. Principals/Headmasters reported inadequate smart classrooms, insufficient computers and unreliable internet connectivity. The findings show that infrastructure remains one of the major barriers to successful digitization under Samagra Shiksha. Similarly, Swargiary and Roy (2024) identified the digital divide and infrastructural limitations as significant obstacles to the successful implementation of digital education under Samagra Shiksha.

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

5. Integration of digital tools in teaching-learning

Teachers reported low satisfaction with digital integration. 55% were dissatisfied with how digital tools are implemented in their schools. Principals/Headmasters also indicated that digital tools are not fully or effectively implemented due to resource and training limitations. This demonstrates that digital learning tools under Samagra Shiksha have not yet reached their expected level of impact.

6. Challenges in implementation

- Heavy administrative workload.
- Lack of time to implement training.
- Limited follow-up support from authorities.
- Inadequate ICT resources and maintenance.

These barriers reduce the effectiveness of digital initiatives under Samagra Shiksha.

7. Measures and strategies for improving digital education

Enhancing Digital Infrastructure-

- Provide reliable internet connectivity to all schools, especially most of the primary schools did not have internet connection.
- Ensure each school has adequate digital devices such as smart TVs, tablets, projectors, and functional computer labs.
- Regular maintenance and techpnical support teams should be established at the block level to address hardware and software issues promptly.

Strengthening Teacher Capacity through Continuous Training

- Organize periodic, hands-on digital skill training for teachers beyond initial DIKSHA and NISHTHA modules.
- Encourage peer learning and mentoring systems among digitally proficient and less-experienced teachers.
- Provide incentives or recognition for teachers effectively integrating digital tools into classroom practices.

Institutional and Administrative Support

- Strengthen coordination between the District Education Office, Block Resource Centres (BRCs), and Cluster Resource Centres (CRCs) to monitor digital implementation progress.
- Allocate specific funds under Samagra Shiksha for ICT maintenance, digital resource creation, and internet subscription.
- Integrate digital education goals into School Development Plans (SDPs) to ensure sustainability.

Monitoring and Evaluation Mechanisms

- Establish a robust monitoring framework to assess the usage and impact of digital initiatives regularly.
- Use feedback from teachers and students to revise training content and digital resource materials.
- Introduce performance indicators to evaluate progress in digital learning outcomes annually.

CONCLUSIONS

The findings of this study indicate that the implementation of digital education under the Samagra Shiksha scheme in Mamit District, Mizoram, has been partially effective but still faces considerable challenges. The scheme has successfully introduced teachers and headmasters to important government-supported platforms such as DIKSHA, UDISE, and VSK, showing a high level of awareness and usage of these tools. However, other digital learning resources such as e-Pathshala and SWAYAM remain largely unused, pointing to a need for greater promotion and integration of a wider range of educational platforms.

In terms of infrastructural support, the data reveal that although several schools have received digital boards, tablets, and computers, the majority of respondents 79% still regard their ICT infrastructure as insufficient. The lack of reliable internet connectivity, reported by 67% of participants, continues to be a major obstacle to the successful adoption of digital education. These findings highlight a critical need for improved infrastructural investment and connectivity, especially in rural and remote areas of Mizoram where digital access is still limited.

Teacher capacity-building through training programmes such as DIKSHA and NISHTHA has been a significant component of the Samagra Shiksha initiative. Teachers generally view these programmes as beneficial, particularly in improving classroom management, pedagogical approaches, and inclusive education strategies. Nevertheless, the lack of refresher courses, follow-up support, and time constraints due to administrative workload hinder the full implementation of what has been learned. This suggests that while training initiatives are valuable, their long-term impact depends on continuous professional development and practical support within schools.

Furthermore, the study shows that 69% of teachers have not received any formal training in implementing digital education, reflecting a significant gap between policy intentions and ground-level execution. In addition, the limited opportunities for students to enhance their IT skills indicate that the scheme's benefits are not yet fully reaching the learner level. A majority of teachers

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 5 | May 2026 - Peer Reviewed Journal

expressed dissatisfaction with the integration of digital tools, citing poor infrastructure, inadequate training, and weak internet connectivity as major causes.

In conclusion, the study underscores that while Samagra Shiksha has laid a strong foundation for digital transformation in education, its effectiveness is limited by infrastructural, technical, and training-related challenges. For the scheme to achieve its objectives in Mizoram, there is an urgent need to strengthen ICT infrastructure in schools, ensure consistent and reliable internet connectivity, provide continuous and practical digital training for teachers, and establish regular monitoring and feedback mechanisms.

REFERENCES

1. *Banerjee, A., & Biswas, R. (2025). Empowering educators, bridging divides: Evaluating DIKSHA and SWAYAM for digital teacher training and economic inclusion in India. International Journal of Creative Research Thoughts, 13(7), 710-726.*
2. *Behera, S. K. (2024). Effectiveness of NISHTHA 4.0 (Integrated Teacher Training Programme) through DIKSHA Portal for school teachers in Odisha. International Journal of Educational Development Studies, 12(3), 45–57.*
3. *Ghosh, A. (2023). Integrating ICT in Indian schools: Opportunities, challenges, and policy perspectives under Samagra Shiksha. Journal of Education and Digital Learning, 8(2), 112–126.*
4. *Kanvaria, V. K., & Dubey, R. (2022). Teachers' perceptions of digital professional development through DIKSHA and NISHTHA platforms. Contemporary Education Dialogue, 19(4), 255–270.*
5. *Ministry of Education. (2021). India report on digital education 2021. Government of India. https://www.education.gov.in/*
6. *Roy, K., & Swargiary, K. (2024). A systematic review of the Samagra Shiksha Abhiyan: Evaluating access, quality, inclusivity, digital education and implementation challenges. https://doi.org/10.13140/RG.2.2.28829.73449.*
7. *Sharma, R. (2021). Impact of ICT integration on teaching practices in Indian classrooms: A policy and practice perspective. Indian Journal of Educational Research, 10(1), 88–101.*
8. *Shokeen, A., & Kaur, B. (2025). Evaluating perception of Delhi Government school teachers towards the DIKSHA platform: A TAM-based analysis. Indian Journal of Education, 7(1), 243-255.*
9. *Shruthi, R., Singh, P., & Reddy, N. (2021). Bridging the digital divide: Challenges of ICT implementation in rural schools of India. Asian Journal of Distance Education, 16(4), 98–110.*
10. *Singh, R., & Bhavdev, K. (2024). Digital infrastructure and e-learning in rural India: Post-pandemic realities and reforms. Education and Society, 14(1), 34–48.*