IMPACT ASSESSMENT REPORT

TRANSFORMING SCHOOL EDUCATION WITH ICT INTEGRATION

Unique ID-KMBL202122010

kotak Kotak Mahindra Bank

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EVERYULB TECHNOLOGIES PRIVATE LIMITED

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Ethical Considerations

- **Informed Consent:** Interviews were conducted with respondents' consent, and permission was reconfirmed after completion.
- **Confidentiality:** Participant information is kept private, with no disclosure of identities. Findings are presented anonymously.
- **Comfort:** Interviews were arranged according to respondents' preferences and schedules for their convenience.
- **Right to Reject or Withdraw:** Respondents could refuse to answer questions or withdraw from the study at any time.

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Executive Summary

The 'Transforming School Education through ICT Integration' project aimed to impart skills and knowledge for integrating ICT in schools to the 'Student Teachers' (students pursuing master's, bachelor's, and diploma courses in education) and 'Teacher Educators' (those responsible for training teachers). The program emphasized the development of open educational resources (OER) using ICT and the enhancement of digital resources to empower educators. The assessment used Mixed Method Approach and data primarily came from 65 quantitative surveys and 22 qualitative in-depth interviews.

Key Findings

The training significantly enhanced the teachers' skills and acknowledged the need to integrate ICT. The stakeholders interviewed acknowledged the effectiveness of the training by incorporating ICT methods into their daily teaching practices resulting in higher student engagement and reduced teaching time.

The **Pre-Service and In-service teachers** responded about their experiences of learning ICT in education during their B.Ed Course and training sessions. The major findings related to the learning & development, ICT methods & applications and its integration, different concepts, awareness and practical exposure, digital resources and continous learning, transition to digital teaching, impact on classroom teaching and students and a few challenges.

25.8% NPS

A Net Promoter Score of **25.8%** indicated a positive sentiment among Pre-service teachers.

94% of the Pre Service Teachers interviewed agreed that the training was effective in ICT Skill Development

63% of the Pre Service Teachers interviewed agreed that the ICT can be integrated in all the subjects.

Majority of the teachers wants to follow the mixed method for teaching using ICT and regular approach indicating the teachers have developed a positive approach for ICT approach in education.

36% NPS

A Net Promoter Score of **25.8%** indicated a positive sentiment among Pre-service teachers.

97% of the In-service teachers interviewed found training sessions beneficial in integrating ICT as a tool in the subject(s)

90% of the In-service teachers agreed that the training content was easy to understand and follow and apply the learning of ICT integration within the classroom.

CONCLUSION

In conclusion, the study highlights that the ICT training helped to improve comfort, familiarity, usage, understanding ICT integration with the ICT tools. The ICT integrated approach has been successful in connecting academic content & technology for easier - faster understanding.

About Project

The project implemented a teacher training and school development model to enhance education quality through ICT integration. It builds state governments' capabilities to implement large-scale ICT-based teacher development programs and offers certificate courses for blended and online learning for teachers and educators.

Addressing SDG4 for Teacher Development, the program's core is a school development model that integrates ICT for teacher development, classroom improvements, and school-community linkages, boosting student achievements. It adopts the Technological Pedagogical Content Knowledge (TPCK) framework for the effective use of digital technologies in teaching.

The project also focuses on developing and curating digital learning resources, including Indic languages, as Open Educational Resources (e-content). Teachers gained hands-on experience with educational applications and resource integration. The program targets in-service teachers, B.Ed. students, and teacher educators, emphasizing both 'ICT for teaching' and 'Teaching ICT' to foster partnerships with the education system and communities. This two-pronged approach ensured the learning and development of the teachers, and students and at the same time promoted ICT for larger academics.

Project Context:

IThe adoption of ICT and Digital Education in India can be traced back to the late 20th century when computers and the internet began making inroads into the country. As technology infrastructure improved and digital literacy grew, e-learning platforms, online courses, and digital resources started gaining acceptance.

The watershed moment for digital education arrived in the early 2000s when India launched the National Mission on Education through ICT (NMEICT), aimed at providing quality education using ICT. NMEICT led to the development of the Sakshat portal, offering a vast repository of educational resources.

The Digital India initiative, launched in 2015, has promoted digital technologies in education through various e-governance programs. SWAYAM, India's MOOC platform, started in 2017, and the National Digital Library (NDL) began in 2015, amassing extensive digital content by 2023. Government programs like PM e-Vidya and the National Education Policy 2020 further integrated digital resources into education. ICT and digital education in India offer advantages such as enhanced accessibility, personalized learning, diverse multimedia content, scalability, and cost-effectiveness[1].

The global outbreak of COVID-19 abruptly disrupted traditional modes of education. In India, as schools and colleges shut their physical doors to contain the virus, the education sector turned to digital means to ensure continuity. The COVID-19 crisis has obliged most education systems to adopt alternatives to face-to-face teaching and learning. Many education systems moved activities online, to allow instruction to continue despite school closures [2].

In conclusion, ICT and Digital Education in India have come a long way, offering a promising avenue for accessible, flexible, and effective learning. The COVID-19 pandemic served as a catalyst, accelerating the adoption of digital education.

Need of Project

The 21st century has seen a significant rise in ICT and digital education in schools, transforming traditional teaching methods. As technology becomes integral to daily life, the education system must adapt, necessitating teacher training. Teacher training for ICT and digital education began in the early 2000s with the introduction of computers in Indian classrooms, gaining momentum with the National Policy on Education 2020. This training has been crucial in building foundational skills and fostering 21st-century skills like communication, collaboration, creativity, critical thinking, and problem-solving. Teachers, often accustomed to traditional methods, need upskilling to use technology effectively in classrooms. Supporting teacher training in using digital resources and promoting adaptive teaching practices is essential for leveraging ICT effectively [3].

Teacher attitudes, beliefs, and lack of knowledge and skills hinder technology use in education. Training in ICT and digital education is crucial for adapting to the evolving educational landscape and guiding students effectively [4][5].

Objectives of the Study

1. To understand the assistance provided in learning and development from the training.

2. To evaluate and quantify the impact generated by the implementation partner training program.

3. To assess the long-term impact of the project on enhancing awareness and utility of the learning affecting the classroom environement.

4. To provide insights and recommendations for program enhancement and scalability.

The **OECD DAC Framework** was used on a macro level for **Intervention Process Audit**. The OECD DAC Network on Development Evaluation (EvalNet) has defined six evaluation criteria – relevance, coherence, effectiveness, efficiency, impact and sustainability – and two principles for their use. These criteria provided a normative framework used to determine the merit or worth of an intervention (policy, strategy, programme, project or activity). They served as the basis upon which evaluative judgements are made.

Source: OECD (2021), Applying Evaluation Criteria Thoughtfully, OECD Publishing, Paris,https://doi.org/10.1787/543e84ed-en.

CHAPTER- 2 APPROACH AND METHODOLOGY

Impact Assessment is necessary and important for measuring the social impact of the projects and activities, for their contribution to society. It helps the organization to understand what works and what does not, helping them to make a data-backed decision for resource allocation. The impact assessment would also focus on the output and outcomes of the activities and projects by mapping the value creation for the project beneficiaries.

2.1 Approach

This study utilised a **Mixed Approach**, quantitative and qualitative approach to gain deeper insights into the activities, outputs, and outcomes of the intervention. Quantitative surveys provided data regarding the output of the projects and the experiences of the stakeholders. Qualitative In-depth interviews enabled a rich understanding of the project, and the experiences of the stakeholders and assessed potential recommendations and suggestions to improve the program. The research design involves a convergent parallel design where the data was analyzed independently, and then the interpretation was done together to conclude [6].

2.3 Assessment Framework

The framework helps us to understand efficiency at the project or organization level. The **OECD DAC Network** on Development Evaluation (EvalNet) has defined six evaluation criteria – relevance, coherence, effectiveness, efficiency, impact and sustainability.

These criteria provide a normative framework used to determine the merit or worth of an intervention (policy, strategy, programme, project or activity). They serve as the basis upon which evaluative judgments are made.

2.2 Sampling

Sr. No.	Methodology	Preservice Teachers	Inservice Teachers
1	Quantitative Surveys	35	30
2	Qualitative Interviews	12	9

Table 1: Sample Size Distribution

2.4 Data Analysis

Recorded qualitative data from the interviews was transcribed in an in-depth manner. The transcriptions were interpreted to find out essential and relevant themes. The themes were merged to bring out the patterns and key insights. The data is presented in graphs wherever we have it in the required format and the thematic insights are supported by quotations from the stakeholders.

2.5 Limitations

The interviews were conducted over phone calls bringing in the challenges of connectivity and call drops. Also, the program was conducted a few years before hence the data was dependent on the recall capacity of the participants.

2.6 Data quality assurance, validation and analysis

The quantitative surveys were conducted online via Google form and the qualitative interviews were conducted over phone calls. The researcher himself conducted all the interviews ensuring uniformity and a single point of data collection and management.

During the research, interviews were conducted with teachers and parents, adhering to ethical rules of social research. This involved obtaining informed consent, ensuring privacy, and avoiding harm. Explicit verbal consent was sought from participants, emphasizing confidentiality and the right to withdraw.

PRE-SERVICE TEACHERS

Pre-Service Teachers, these B.Ed. students are assessed on their learning and the influence of the ICT course on them. The assessment data is mainly gathered from 35 quantitative surveys and 12 qualitative in-depth interviews.

Understanding of ICT after pursuing the course

94%

Agress to effective ICT Skill development

63%

Feels ICT can be integrated in all subjects

57%

Wants to follow a mixed method of teaching

57%

Schools are able to provide facilities for ICT integration

43%

Schools need facilities to implement ICT integrated approach

37%

Agrees for the continuation of ICT Integrated Approach

11%

Finds difficulty in implementing ICT integrated approach

29%

Net Promoter Score

> *There is a shift happening from conventional teaching to hands-on teaching with visually understandable content, making ICT crucial. In these situation the teachings and resources of ICT is very helpful.*
>
> *In my opinion, the influence of ICT will certainly increase and the burden on teachers will reduce.*
>
> *- Pre Service Teacher/ B.Ed Student*

Experience

The majority of responses from the stakeholders for understanding ICT integration in school education fall within the range of 4 to 5, emphasizing a consistent positive perception of their understanding of ICT integration and acknowledging the role of ICT in education.

> *"ICT will be very helpful to all B.Ed. students, especially many from rural areas who may not know how to use a computer. With ICT sessions, they will gain exposure to using computers, which will also aid in career development."*
>
> *- Pre Service Teacher/ B.Ed Student*

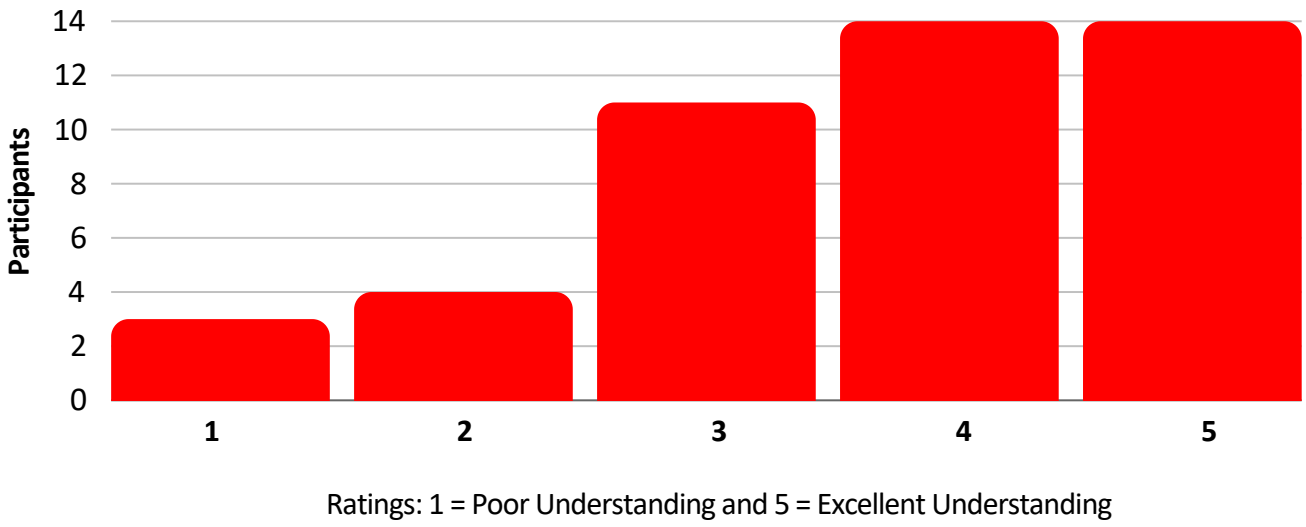


Figure 1: Overall understanding of ICT integration in school education after completing the ICT course in B.Ed.
Ratings: 1 = Poor Understanding and 5 = Excellent Understanding

The course has been successful in developing a positive attitude towards ICT Integration showing a consensus on its significance for the future of teaching and learning. The participants agreed on the importance and the need for hands-on experience with the technology. The training also ensured the readiness of the teachers to connect with students who are actively involved in electronic gadgets and the virtual world.

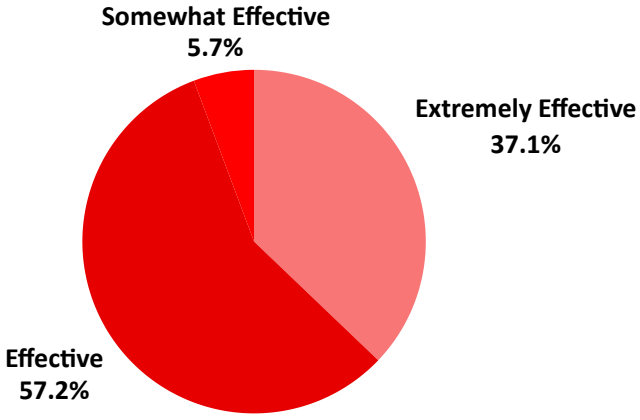


Figure 2: Effectiveness of the Teaching content in developing skills and understanding ICT

ICT is seen as a valuable support for teachers rather than a complete replacement. There is a preference for parallel integration of ICT with manual methods. This approach allows students to learn topics manually while also gaining hands-on experience with ICT tools.

> *"The tools helped enhance learning and the retention of topics, especially in Mathematics."*
>
> *- Pre Service Teacher/ B.Ed Student*

The training has made the participants believe in the significant role of ICT integration in the future of teaching and learning. There's a consensus that it is crucial to adapt to modern educational needs. While the overall response of understanding ICT integration as a part of B.Ed. the course is positive and was dependent on the work experience after completing their B.Ed course. The participants highlighted a few challenges:

Adjusting to New ICT Methods and Applications – The course is a new special edition to the study which involved using technology and applications that pre-service teachers took some time to get used to.

Individual Differences in terms of understanding the language and concepts – The teachers highlighted language as one of the challenges but they could gradually get along with it after receiving assistance from classmates and facilitators.

Lack of Resources/Access/Technical Support – A few teachers did not have access to personal computers to practice and quickly develop the necessary expertise and skills.

Distribution of Time and Efforts – A few teachers highlighted if they had had more time to focus on ICT as a course it would have helped them understand it better.

> *Until attending the sessions, I did not know about the Geogebra tool. Now I can make use of such tools*
> *- Pre Service Teacher/ B.Ed Student*

A lot of teachers perceived the teaching content of the course to be effective in developing their skills and understanding. The positive responses suggested a successful implementation of teaching units and the effectiveness of teaching units in developing their skills and understanding of ICT.

Participants express satisfaction and acknowledge the practical applicability of the content. Showing an awareness and utility of the content of the course. Participants generally agreed that the training program helped improve their comfort, familiarity, and usage of ICT tools. The teaching units and content primarily helped the participants in:

Increased Awareness - The training is certainly credited with increasing awareness about ICT tools, and their use. The practical sessions and exposure were a certain benefit of the course.

> *ICT should be continued in more inclusive and effective way. If this training stops many students would be loosing.*
>
> *Training sessions received less time from school. There is a scope to increase online classes, maybe even on Sundays.*
>
> *Pre-Service Teachers*

> *One important learning was using tools and resources for assessment and evaluation. The tools made me explore things I didn't know before.*
>
> *The visual learners and kinesthetic learners (students) usually benefits a lot from the use of ICT.*
>
> *Pre-Service Teachers*

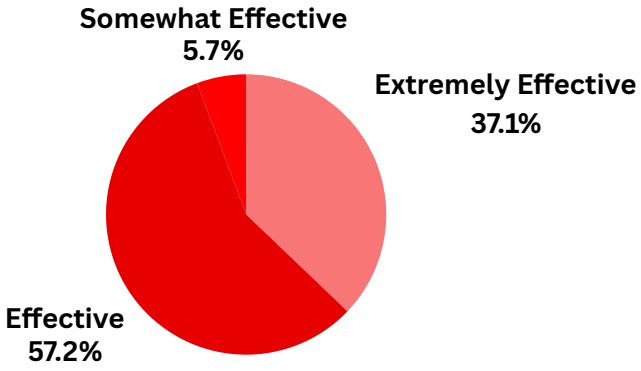


Figure 3: Beneficial Training in helping to learn to integrate ICT as a tool in the subject(s).

Enhancing teaching and learning effectiveness - One of the participants mentioned that using visual effects (skills and applications taught in the teaching units) made it easy for children, emphasizing the importance of visual aids in teaching. The use of Geogebra is specifically praised for its quantification in image form, making classes enjoyable. ICT is also seen as facilitating the efficient and effective transfer of learning.

Learning and Development

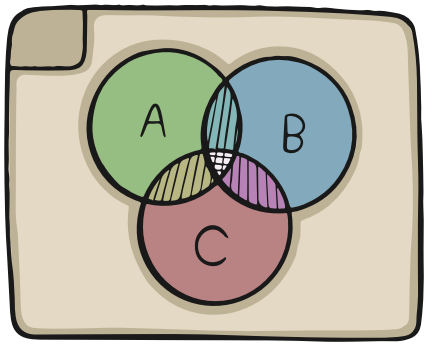
Teachers mentioned a diverse set of skills acquired, ranging from specific software proficiency (e.g., Freeplane, Geogebra, PHeT, H5P, and Audacity) to broader competencies (e.g., problem-solving, critical thinking, collaborative teaching). Creative skills such as Concept Mapping, Mind Mapping and Video making are highlighted in emphasizing the role of ICT in fostering innovative and engaging instructional practice. Critical Thinking, Questioning, and Thinking Out of the Box are emphasized, underscoring the importance of ICT in cultivating higher-order thinking skills among educators.

Skills related to organization, communication, collaboration, and societal aspects demonstrate the broader impact of ICT on teachers' professional development and collaborative teaching practice. The benefits of the course for the students can be broadly classified into Pedagogical Enhancement, Professional Development, Curriculum planning and design, Digital literacy and Holistic skill development

> *The use of tools and applications brings variation to teaching, making the classroom more creative and kindling interest among students.*
>
> *Main skills learned from training sessions include integration of ICT in subjects, lesson planning, and using ICT in schools that cannot afford technology.*
>
> *Pre-Service Teachers*

Exposure and Experience - Familiarity with Audio-visual learning through ICT tools improved learning and retention. Prior preparation makes it feasible to implement ICT tools improving efficiency.

> *I use these tools to teach students with below-average grades, helping them visualize the content. They have been incredibly helpful; without them, I wouldn't have learned as effectively.*
>
> *- Pre Service Teacher/ B.Ed Student*



Transition to Digitalised Teaching - The course recognised and facilitated the shift from conventional to digitalised teaching methods and practices viz.; assessments, recordings, attendance, notes making and sharing etc. Hence, ICT equips teachers to meet the expectations of the evolving educational landscape.

> *There is a shift happening from conventional teaching to hands-on teaching with visually understandable content, making ICT crucial.*
> *- Pre Service Teacher/ B.Ed Student*

Positive Impact on the Teaching Methods: Manual methods on the board are positively impacted by the incorporation of digital tools.

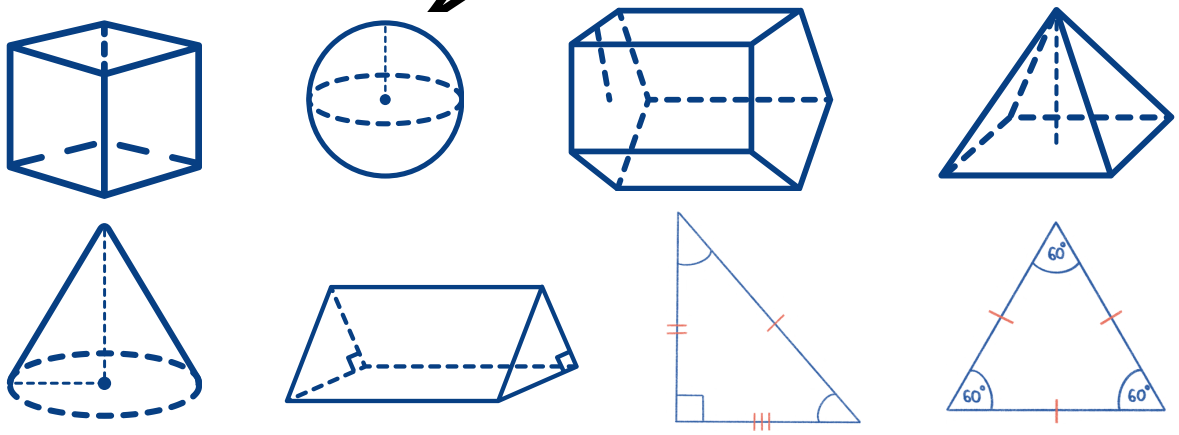
> *At the beginning, I didn't know such a tool existed. I was thrilled to learn about it, enjoyed using it, and saw that my students enjoyed my class.*
>
> *At the beginning, I didn't know such a tool existed. I was thrilled to learn about it, enjoyed using it, and saw that my students enjoyed my class.*

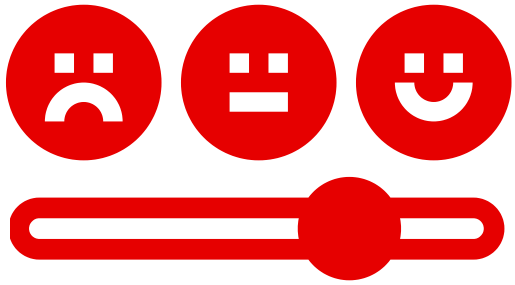
Enhanced Classroom Engagement -ICT tools stimulate interest among students enabling them to ask questions in the classroom, making lessons more engaging.

Content Accessibility - Ready-to-use content with pictures and stimulation reduced preparation time and cost, and can be translated into various languages, promoting content enrichment, efficiency and accessibility.

Personal and Professional Growth - It plays a role in making students better individuals, and ready for the competitive professional and technological demands. It is essential for shaping the careers of B.Ed. students, especially those unfamiliar with computers.

Moodle, a learning platform and repository had a significant role, Serving as a centralized hub, Moodle enabled students to submit assignments while providing teachers with an accessible platform for evaluation based on predefined criteria. It offers a platform for interaction, problem-solving, and content sharing. With accessibility, it becomes a valuable resource for remote learning and communication.





Net Promoter Score

The Net Promoter Score (NPS) is a metric used to gauge the satisfaction of the teachers who have attended the training sessions and workshops.

It is calculated based on a single question: "How likely are you to recommend our company/product/service to a friend or colleague on a scale of 0-10? Participants answering with 9 or 10 are considered Promoters, indicating positive experiences and a high likelihood of recommendation. Scores of 7 or 8 are considered passive, and neutral with no strong opinion. Participants answering with 0 to 6 are Detractors, expressing dissatisfaction. The calculation includes data from 35 quantitative surveys. Here, Promoters = 48.6%, Passives = 28.6% and Detractors = 22.8%

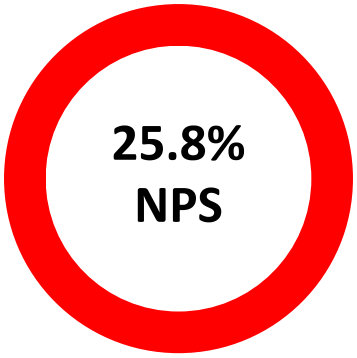


Figure 4: Net Promoter Score of Pre-Service Teachers

Formula: NPS = (% of Promoters) - (% of Detractors) = 25.8%. **A Net Promoter Score of 25.8% indicates a positive sentiment among Pre-service teachers.**

> *Lesson plans and notes were shared on Moodle, providing an opportunity to learn from colleagues and others.*
>
> *Pre Service Teacher/ B.Ed Student*

Recommendation

Further learning - The Preservice teachers would like to learn more about creating Google Sheets, excel in the program, video creation and recording online meetings.

Time Management and Learning Pace - Time constraints are a common concern, and participants recommend an increase in the duration of training sessions and giving sufficient time to learn. The Preservice teachers have highlighted the need to teach slowly and have more number of classes.

Practical Application and Skill Development - Participants expressed the need for more practical and hands-on sessions to enhance technical skills for unfamiliar platforms.

IN-SERVICE TEACHERS

In-Service Teachers, the school teachers are assessed for their learning, development and experiences from the course. The assessment data is mainly gathered from 30 quantitative surveys and 10 qualitative in-depth interviews.

100%
The training helped to improve comfort, familiarity and usage with the ICT tools

27%
teachers would like to follow a mixed method

17%
Finds difficult to implement ICT integrated approach

100%
Training sessions were beneficial in understanding ICT integration in the classroom

97%
Training sessions were beneficial in helping integrate ICT as a tool in the subject(s)

97%
The ICT integrated approach has been successful in connecting academic content & technology for easier - faster understanding.

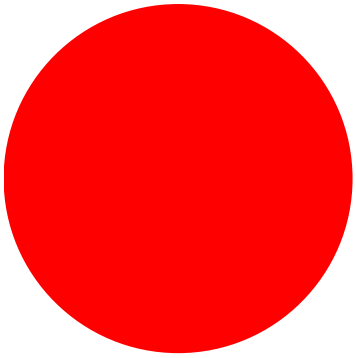
93%
The training sessions and capacity-building program had enough real-life examples

90%
Most of the training content was easy to understand and follow

90%
It is easy for teachers to apply the learning of ICT integration within the classroom

57%
Teachers would like to continue with ICT integrated approach

36% Net Promoter Score



> *The notes are prepared only once and then it can be used lifetime. I would like to continue with the ICT Integration method since it saves my time and also I don't have to prepare work sheets and notes time and again. This saves on cost also. - In Service School Teacher*

Experience

The In-service teachers taught a diverse range of subjects, with a notable emphasis on Mathematics and English and other subjects such as Science, EVS (Environmental Studies), Telugu, and Social Sciences. Mathematics emerges as the most commonly mentioned subject, suggesting a significant interest or involvement in the integration of ICT in the teaching and learning of mathematical concepts. The inclusion of regional languages like Hindi, Kannada, and Telugu suggests ICT integration in linguistic subjects highlighting the potential for ICT to cater to many academic subjects. The diversity in subject representation indicates an exploration of technology's applicability across the educational spectrum, supporting a holistic and inclusive approach to ICT in education.

The majority of teachers agreed that the training facilitated the integration of ICT into their subjects indicating a positive perception of the effectiveness of the training program in preparing teachers for incorporating technology into their teaching practices.

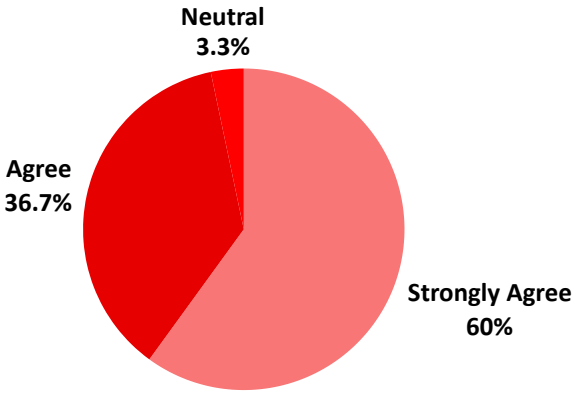


Figure 5: Training sessions were beneficial in helping integrate ICT as a tool in the subject(s)

There is a consensus that the workshop and the training program helped in building subject knowledge and a better understanding of ICT integration possibilities in the classroom. The positive feedback implies that the training sessions were well-designed and delivered, providing valuable insights and practical knowledge on incorporating technology into the educational context. The consensus among teachers also suggests that investing in well-designed training programs is crucial for fostering a positive and effective use of technology in educational settings.

Learning and Development

The participants have shown a positive reception to the training materials and suggest that the majority of them found the content accessible and comprehensible. The training helped to improve comfort, familiarity, and usage of ICT tools by provisioning sufficient practice and resource materials for reference. This suggests the content was effective in conveying the intended information and skill.

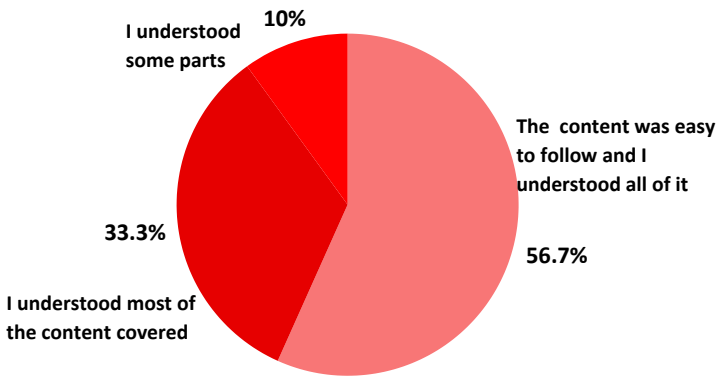


Figure 6 : Understanding of the content and training materials of the training sessions.

> *Initially we only knew about PPT but after attending the sessions I realized that we knew very less about technology in Education. We had zero knowledge about technology. In these sessions we learnt lot of things.- - In Service School Teacher*

The training sessions and capacity-building programs provided sufficient real-life examples and teaching aids to comprehend ICT concepts indicating that the program was well received and there is a positive perception among the participants regarding the quality of the training. Following are the highlights of the learning of the teachers.

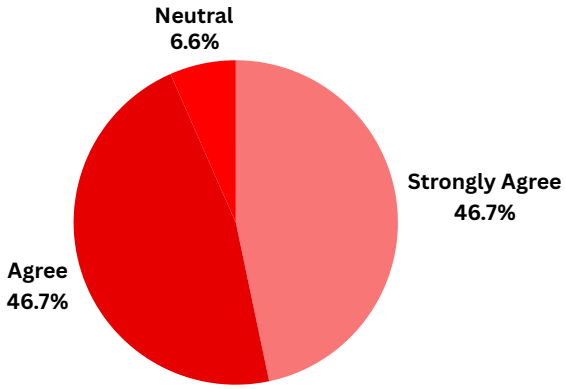


Figure 7: The training sessions and capacity-building program had enough real-life examples

ICT Skills and Professional Development - Basic ICT knowledge and hands-on experience with various tools and applications have been important for professional development.

> *Using ICT has helped me to increase my knowledge and also knowledge of the students.*
> *-In Service Teacher/ B.Ed Student*

Concept Mapping - Explored and used the creation of concept maps using tools like Freeplane and also incorporated flowcharts for visual representation of ideas, integrated diverse elements like content, videos, and footnotes into concept maps.

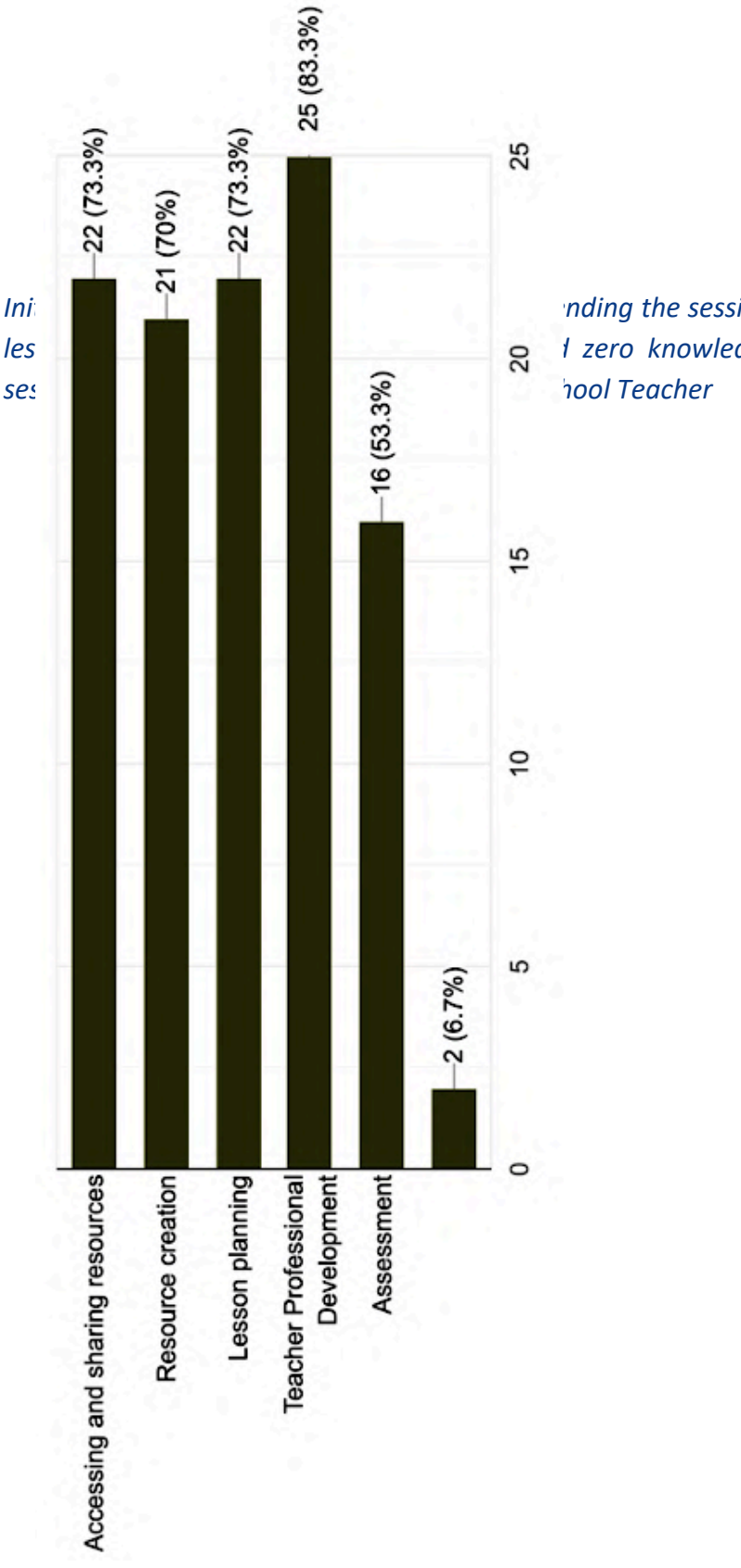


Figure 8: Uses of Digital Technology

ICT minimizes time of teaching. What I use to teach in 4-5 hours earlier but now with the use of ICT I teach the same thing in 1-2 hours.

- In Service School Teacher

Technology Integration - The integration of various applications viz; vokoscreen, audacity and similar into daily teaching routines provided information about topics, methods for teaching, aided in note preparation, lesson planning and similar. The integration has highly increased the engagement of the students.

OER and Digital Library - Learned to use Open Education Resources (OER) and also created a personal digital library which assisted in lesson planning. This facilitated collaborative learning.

Continuous Learning and Application - Participants actively implement learnings from tools like Audacity and GeoGebra and there is an encouragement for a practical approach to teaching, allowing hands-on learning experiences.

In the traditional method approximately 25% of the students use to show high involvement in class and learning but with ICT integration, the involvement and learning has gone up to about 70%. and this has also improved the results.

- In Service School Teacher

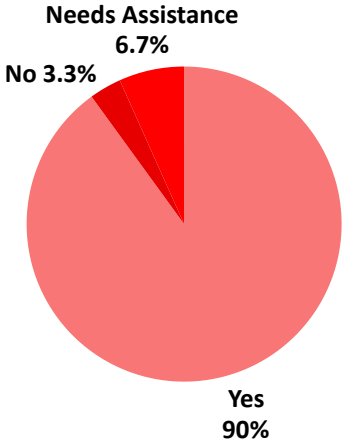


Figure 9: Easy for teachers to apply the learning of ICT integration within the classroom

Geogebra and Robocompass which are primarily associated with mathematics and sciences, appear prominently in the responses of the teachers. Freeplane, a mind-mapping tool, is mentioned multiple times. This suggests a recognition of the value of visual aids and organizational tools in supporting students' conceptual understanding. The engagement with tools such as LO Writer, LO Impress, and Audacity reflects a multidimensional approach to using FOSS tools, incorporating both content creation.

Geogebra and PHeT helped us a lot to understand the students and reach to the basic level of the students and teach them the concepts practically. - In Service School Teacher

Most teachers recognized the multifaceted use of digital tools for accessing and sharing resources. The ICT-integrated approach successfully connected academic content with technology, enhancing understanding and promoting an interactive, flexible teaching-learning experience. Students also readily accept ICT integration in their learning process.

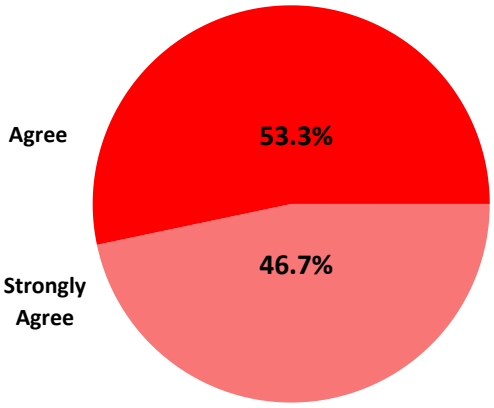


Figure 10: Easy for students to accept an ICT integrated approach in the teaching learning experience.

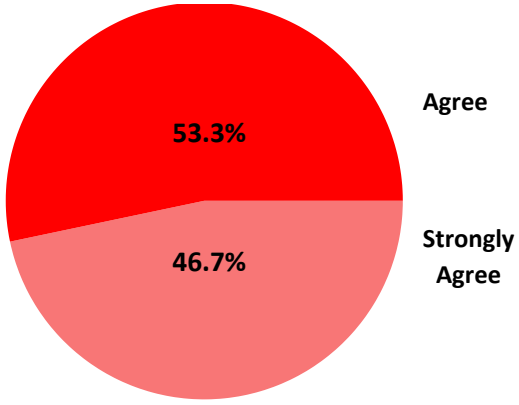


Figure 11 : Success in promoting an interactive and flexible method of teaching-learning experience.

Interest and Scope

A majority of teachers expressed a preference to continue with an ICT-integrated approach to teaching. A few teachers have also expressed a preference to have a mixed method of teaching, suggesting an interest in combining traditional teaching methods with ICT, highlighting a balanced and diversified approach.

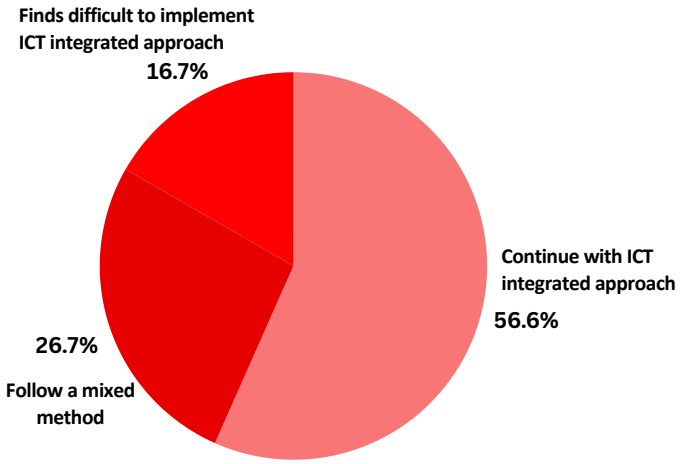


Figure 12: Adoption and continuing with ICT integrated approach

> *ICT is certainly making it easier to teach Mathematics But we also need blackboard and chalk method many a times to teach and practice mathematics. Hence, I would like to follow a mix of both methods.*
>
> *- In Service School Teacher*
>
> *The notes are prepared only once and then it can be used lifetime. I would like to continue with the ICT Integration method since it saves my time and also I don't have to prepare work sheets and notes time and again. This saves on cost also.*
>
> *- In Service School Teacher*

Initially, there was a hesitation among teachers to adopt ICT activities, but they become more receptive after exposure. Newer teachers who were aware of the benefits, show greater interest in ICT adoption for it being time-saving and effective teaching. Varied opinions exist regarding the necessity of ICT, with some teachers questioning its relevance if traditional methods suffice. Resistance is noted, particularly among older teachers, who question the need for adopting new technologies.

Challenges arise in understanding the usage of ICT, and some teachers lacked confidence in teaching concepts they haven't prepared digitally. Some teachers find it difficult to incorporate ICT and expressed interest in reverting to traditional education methods.

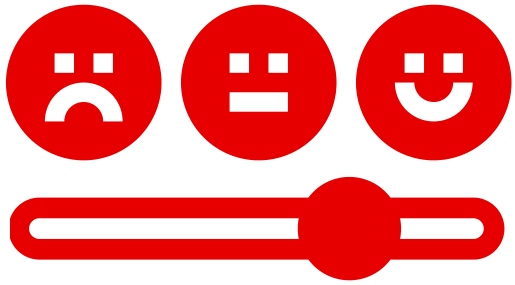
> *Sometimes when we don't understand and remember the functions and use of the tools. In such case we use internet and YouTube to refresh our learning.*
> *- In Service School Teacher*

The routine discussions among teachers cover a range of topics, including the adoption of ICT, personalized learning systems, age-related differences in technology readiness, and the impact on teaching methodologies and workloads. The discussion underscores there is a general acceptance of the technology and increasing usage interest in it among teachers.

The analysis reveals a few challenges faced by teachers during ICT integration training. Network issues and the desire for a more stable online and offline learning environment were prominent. Other challenges such as time management and technical issues like hardware and software problems were also faced by the teachers. Some teachers expressed a need for more in-depth learning opportunities. The data suggests a diverse range of challenges that should be considered when designing and implementing ICT integration training programs for educators.

Language Barrier - A few teachers have also highlighted issues in completely understanding the English language of the workshop. The teachers had assistance from other teachers and trainers to overcome the challenge.

Limited Understanding of ICT - The teachers with limited experience and exposure to technology and ICT faced challenges in understanding everything they were exposed to during the workshop. But gradually with assistance from other teachers and trainers, they became aware of the ICT tools and applications ensuring they were equipped with the required skills.



Net Promoter Score

The Net Promoter Score (NPS) is a metric used to gauge the satisfaction of the teachers who have attended the training sessions and workshops. It is calculated based on a single question: "How likely are you to recommend our company/product/service to a friend or colleague on a scale of 0-10?"

Participants answering with 9 or 10 are considered Promoters, indicating positive experiences and a high likelihood of recommendation. Scores of 7 or 8 are considered passive, and neutral with no strong opinion. Participants answering with 0 to 6 are Detractors, expressing dissatisfaction. The calculation includes data from 35 quantitative surveys. Here, Promoters = 56.6%, Passives = 23.04% and Detractors = 20.36%

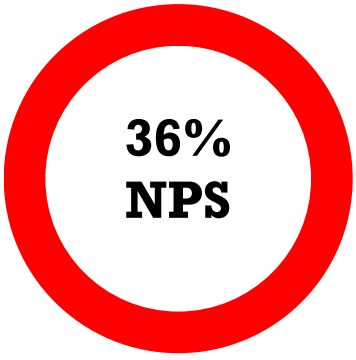


Figure 13: Net Promoter Score of In-Service Teacher

Formula: NPS = (% of Promoters) - (% of Detractors) = 36.24%. **A Net Promoter Score of 36.24% indicates a positive sentiment among In-service teachers.**

Recommendation

Time - Many teachers who have started with integrating ICT into their academic syllabus found it overwhelming to accommodate notes/ content creation with their regular teaching duties. Adequate time for teachers involved in creating content for ICT integration is the need for many teachers.

> *"Since we have Hindi Medium Students at-times we face problems if the content is only in English language."*
>
> *- In Service School Teacher*

Training and Capacity Building - The teachers have received timely training for the tools, application and necessary knowledge to integrate ICT but they have also highlighted there is a need for more such training at regular intervals (and offline is possible) and also refresher training. Teachers have also expressed interest in learning about advanced topics such as Artificial Intelligence (AI) and Machine Learning. Teachers expressed a desire to learn more applications and tools that can be integrated into various subjects.

> *"Teachers generally want and discuss if the training could be done offline too. Also, the training would be very good if we get regular refresher course"*
>
> *- In Service School Teacher*

Sharing Best Practices - Schools with successful ICT integration can serve as models for others, sharing their strategies and practices to inspire improvements in less technologically equipped schools.

CHAPTER- 4 CONCLUSION

In this impact assessment report, we have delved into the effectiveness of the ICT Integration in Schools, focusing on its training initiatives for school teachers and B.Ed students i.e. In-service teachers and Pre-service teachers. Through analysis, we have identified a few key findings that shed light on the project's strengths and areas for improvement.

One of the standout aspects of the project was its success in providing comprehensive training sessions for school teachers on integrating ICT into their respective subjects. The positive feedback received regarding the quality and relevance of the training content underscores the project's commitment to enhancing educators' ICT competencies. Furthermore, the observed improvement in ICT skills and usage in schools is a promising indicator of the project's impact. Equally significant was the engagement witnessed among students following the integration of ICT into their curriculum. ICT integration has not only lessened teachers' work burden but has also facilitated more efficient teaching methodologies enabling educators to teach more content in less time.

The assessment has also brought to light a few areas that warrant attention for the project to reach its full potential. Firstly, there is a pressing need to address the shortcomings in ICT facilities and hardware resources within schools. Without adequate infrastructure, the seamless integration of ICT into teaching practices becomes a challenge. Therefore, investing in upgrading these facilities should be prioritised to ensure the optimised ICT integration and efficient use of learned ICT skills.

Additionally, while the training sessions for school teachers have been beneficial, there is room for improvement in the development of a dedicated and effective training schedule for both pre-service and in-service teachers. Furthermore, to cater to the varied learning preferences and constraints faced by teachers, the project should consider incorporating more offline training sessions. These sessions can provide valuable hands-on experience and foster a supportive learning environment conducive to skill acquisition and application.

In conclusion, ICT Integration in Schools has made significant strides in equipping educators and students with the necessary tools and skills to thrive in the digital age.

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Figures, Images and Tables

Figures

Cover page image sourced from offical Canva Account

Table 1: Sample Size Distribution

This report captures the impact assessment study for
Kotak Mahindra Bank Limited

27bkc, C 27, G Block, Bandra Kurla Complex, Bandra (E), Mumbai,
Maharashtra, 400051 91 22 61660000

https://www.kotak.com/

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