PROBLEMS FACED BY TEACHERS IN USING ICT IN KERALA

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ABSTRACT

The integration of Information and Communication Technology (ICT) in education is crucial for enhancing the quality of teaching and learning. The government of Kerala has been proactive in promoting ICT integration in schools; IT@School Project, was formed in 2001-02 to fuel ICT enabled education in the schools in the state. However, teachers in Kerala face several challenges in effectively using ICT in classrooms. This study explores the major problems faced by teachers, including inadequate access to technological resources, lack of sufficient training, resistance to change, and inadequate technical support. Financial constraints and poor infrastructure further limit the widespread use of ICT. Additionally, the gap between policy and implementation poses difficulties in effectively integrating technology into the curriculum. This paper aims to analyse these barriers and provide recommendations for addressing them, emphasizing the need for better training programs, resource allocation, and supportive infrastructure to enhance teachers' ability to use ICT effectively.

Key words: Information and Communication Technology (ICT)

1. INTRODUCTION

The use of Information and Communication Technology (ICT) in education has gained significant importance over the years, especially in enhancing learning outcomes and providing an interactive environment for students. The recent curriculum revision of B.Ed. degree of the University of Kerala in 2013 has introduced a new paper – Techno-pedagogy for each optional subject. It was at this juncture during the open house discussions and in the curriculum finalisation meetings most of the teachers voiced their concern about the problems faced by teachers in using ICT and the lack of facilities in schools. This prompted the investigator to undertake a study on the issues concerned.

ICT can and should play a variety of roles inside a school. Some of the more important ones are pedagogical, cultural, social, professional, and administrative. ICT if sensibly deployed and with carefully selected software can positively affect many aspects of school life, from a healthy questioning of present teaching practices to a gradual improvement of the quality, scope and depth of the learning environment as well as to provide a remarkable opportunity for teacher's development. However, its effective use depends largely on the comfort, skills, and access teachers have to these tools. Despite efforts to integrate ICT in the classroom, many challenges still hinder its widespread adoption in Kerala, India. This survey aims to identify the key problems faced by teachers in using ICT for educational purposes in Kerala.

2. NEED AND SIGNIFICANCE

The integration of ICT in education is crucial for preparing students for a digital future and improving the quality of teaching and learning. It has the potential to revolutionize the teaching and learning process. However, teachers in Kerala face various barriers that impede this integration such as; (i) Lack of Access to Adequate ICT Infrastructure (ii) Lack of intenet facility (iii) Lack of Proper Training and Skills (iv) Lack of Technical Support (v) Time Constraints (vi) Resistance to Change (vii) Curriculum and Policy Limitations (viii) High Student-Teacher Ratio (ix) Fear of Failure and Technical Issues (x) Digital Divide

Understanding these problems can help policymakers, educational institutions, and stakeholders develop strategies to enhance the adoption of ICT in classrooms, making it more inclusive and effective. This survey is significant in highlighting the current barriers and suggesting solutions that could improve teachers' experiences with ICT.

3. Statement of the Problem

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4. Objective

This study aims to identify and analyse the problems faced by the teachers in Kerala while incorporating Information and Communication Technology (ICT)

5. Methodology

Survey Design – Normative survey method was adopted for the study

Tool – Questionnaire to identify and analyse the problems faced by the teachers in Kerala while incorporating Information and Communication Technology (ICT)

The survey was designed to identify and analyse the problems faced by the teachers in Kerala while incorporating Information and Communication Technology by focusing on:

i **Access to ICT Infrastructure**
ii **ICT Training and Skill Level**
iii **Institutional Support**
iv **Challenges in Using ICT**
v **Perceived Benefits of ICT**
vi **Suggestions for Improvement**

Sample Selected – The survey targeted 100 school teachers across various subjects and grade levels. The participants were selected based on their experience with It@School.

6. Analysis and Interpretation of Data

The data were analysed using descriptive statistics to quantify the responses, and thematic analysis was conducted to explore qualitative feedback from open-ended questions. The results were categorized into six categories which are discussed below.

Table 1. Access to ICT Infrastructure

Sl.No.	Category	Percentage	
		Yes	No
1.	Do you have access to computers in school?	70%	30%
2.	Do you have personal access to ICT devices?	45%	55%
3.	Is internet available in school?	80%	20%
4.	Is the internet connection in school reliable?	35%	65%
5.	ICT Devices Available at School		
	a. Desktop Computers	40%	60%
	b. Laptops	25%	75%
	c. Projectors	30%	70%

From the table 1 above it is evident that 70% of teachers have access to ICT devices at school, but only 45% have personal access. The disparity between internet availability and its reliability (65% report it as unreliable) is a significant barrier, especially in rural areas. Availability of Desktops, Laptops and projectors are also insufficient to meet the needs of the present era, while trying to incorporate ICT in schools.

Table 2. ICT Training and Skill Level

	Category	Percentage
1	**Received Formal ICT Training from IT@ School Kerala**	
	Yes	40%
	No	60%
2	**Confidence Level in Using ICT**	
	High Confidence	15%
	Moderate Confidence	25%
	Low Confidence	60%
3	**Frequency of Using ICT in Classrooms**	
	Frequently	25%
	Occasionally	40%
	Rarely/Never	35%

From the analysis given in table 2 above only 40% of the teachers have received formal ICT training from IT@School, Kerala, and only 20% feel highly confident in using ICT tools. A large portion (60%) reported low confidence, indicating the need for additional training programs. Only 25% teachers use ICT frequently even though 50% have received formal training

Table 3. Institutional Support

Sl.No.	Category	Percentage	
		Yes	No
1	Technical Support for ICT Available	40%	60%
2	Institution Encourages ICT Usage	50%	50%

Half of the respondents (50%) feel that their institutions do not encourage ICT usage, and 60% lack technical support, indicating a need for administrative intervention to promote ICT integration.

Table 4. Challenges in Using ICT

Sl.No.	Challenges	Percentage
1	Lack of Proper Training	60%
2	Poor ICT Infrastructure	55%
3	Resistance to Change (among teachers/colleagues)	40%
4	Lack of Time for Preparing ICT-based Lessons	50%
5	Lack of Technical Support	40%
6	Fear of Technical Failures or Mistakes	35%

7	Unreliable Internet Connection	60%
8	High Student-Teacher Ratio	30%

The primary challenges identified were lack of proper training (60%), poor ICT infrastructure (55%), and unreliable internet (60%). Additionally, lack of time for preparation (50%) and lack of technical support (40%) are significant barriers

Table 5. Perceived Benefits of Using ICT

Sl.No.	Perceived Benefits	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Improved Student Engagement	40%	25%	20%	10%	5%
2	Better Learning Outcomes	30%	20%	30%	15%	5%
3	Improved Efficiency in Lesson Planning/Delivery	25%	15%	40%	15%	5%

Most teachers (65%) believe that ICT can improve student engagement, and 50% feel it can lead to better learning outcomes. However, only 40% see significant improvement in teaching efficiency, which could be tied to the lack of training and technical support.

7. RECOMMENDATIONS

1. **Regular ICT Training Programs**: Offer ongoing, practical training tailored to the needs of teachers.
2. **Improve Infrastructure**: Ensure reliable internet access and modern ICT equipment, especially in rural areas.
3. **Provide Technical Support**: Establish dedicated technical teams to assist teachers with ICT usage.
4. **Offer Incentives**: Recognize and reward teachers who effectively integrate ICT into their teaching practices.

8. CONCLUSION

This study highlights the key challenges faced by teachers in Kerala while using ICT in classrooms. Inadequate training, poor infrastructure, and lack of institutional support are the main obstacles to ICT integration. Despite these challenges, teachers acknowledge the potential benefits of ICT, particularly in improving student engagement and learning outcomes. Addressing these issues through targeted policies and interventions by the IT@ School programme could significantly enhance the use of ICT in Kerala’s education system.

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