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Integrating ICT Tools in Primary Education: Enhancing Student Engagement and Learning Outcomes in Jammu and Kashmir

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Abstract: ***This research paper explores the integration of Information and Communication Technology (ICT) in primary school classrooms to enhance student engagement and improve learning outcomes. The study focuses on classroom practices implemented in a government primary school in Jammu & Kashmir, where tools like digital content, interactive learning apps, and smart classroom resources were utilized. Data was collected using classroom observation, student feedback, and teacher reflection journals over a period of four weeks. Findings indicate that ICT-based teaching increased active student participation by 35% and improved conceptual clarity in science and mathematics subjects. The paper concludes that strategic use of ICT tools, combined with effective teacher training, can significantly enhance the quality of primary education and support NEP 2020 objectives.***

Keywords: ICT in education, primary teaching, digital learning, Jammu & Kashmir, NEP 2020

1. Introduction

The integration of Information and Communication Technology (ICT) in classrooms has emerged as a key driver for improving educational outcomes. The Government of India, through initiatives like SWAYAM, DIKSHA, and PM e-Vidya, has emphasized the need to empower teachers and students with digital tools. In Jammu & Kashmir, where many schools face challenges such as lack of resources and remote geographical settings, ICT can bridge learning gaps. This paper explores how ICT tools can be used effectively in primary schools to improve student engagement and performance.

2. Methodology

The study was conducted at Govt. Boys Primary School Batkoot Check Hariwatnoo Tangmarg, Kashmir. Data was collected for four weeks using:

1) Classroom observation (two sessions per day)
2) Student feedback (20 students)
3) Teacher reflection journals documenting classroom experiences.

3. Results

Analysis of classroom data revealed:

1) Student engagement increased by 35% (time spent actively participating in class activities).
2) Average test scores in Science and Mathematics improved by 20%.
3) Students reported greater enjoyment in ICT-enabled lessons compared to traditional methods.

4. Conclusion

ICT tools, when properly integrated into the teaching-learning process, can significantly improve classroom engagement and learning outcomes. Teachers must be trained to use these tools effectively, and infrastructure support should be provided to ensure sustainable implementation. This research aligns with NEP 2020 objectives, highlighting the importance of digital technology in school education.

Graphical Representation of Results

Below is a graphical representation of improved student engagement and test performance:

Parameter	Before ICT (%)	After ICT (%)
Student Engagement	50	85
Test Scores (Avg)	60	80

This table shows that student engagement improved by 35% and test scores increased by 20% after ICT integration.

References

[1] NCERT. (2021). ICT in Education Curriculum.
[2] MHRD. (2020). National Education Policy.
[3] UNESCO. (2019). ICT Competency Framework for Teachers.