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IMPACT OF TECHNOLOGY ASSISTED LEARNING PROGRAMME (TALP) ON LEARNING AND ACHIEVEMENT

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Abstract:

Government of Karnataka has redesigned ICT programme in school education and is implemented Technology Assisted Learning Programme (TALP) with an objective to complement normal classroom teaching with ICT enabled teaching and learning in all subjects as well as to ensure digital literacy for all secondary school students for enhancing learning achievement. TALP is an integration of the existing technology assisted programmes of the department such as EDUSAT, Computer based learning under SSA, Tele-Education and ICT-3.Use of digital contents in the form of e-content is promoted under TALP to engage the interest of students and enhance their understanding. The department has mapped the available digital resources in mathematics and science subjects to the state curriculum under various programmes such as Karnataka Open Educational Resources, EDUSAT, Radio, Tele-Education, Amrita O'Labs, Agasthya Foundation Science Experiments and many more.The mapping of resources to other subjects has been initiated. These resources have been pre-loaded to the laptops which are being supplied to schools. A repository of all such e-contents will be made available on the servers located at State Data Centre and schools will be connecting to SDC for updates.TALP aims to combine classroom teaching with ICT enabled teaching and learning in all subjects. Through digital content, the government aims to engage students and enhance their understanding; in this connection this paper seeks the answers to the questions; How TALP is actually being used, the impact of TALP on student learning, motivation and engagement for learning.

Key Words: ICTs, Learning, Achievement andTechnology Assisted Learning Programme (TALP)

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Introduction

Government of Karnataka is betting big on localization of content to enhance accessibility and make learning simpler across the state. The state Government has signed MoU with AjimPremji Foundation, Sikshana Foundation, Pratham and Khan Academy to implement Technology Assisted Learning Programme (TALP).TALP aims to combine classroom teaching with ICT enabled Teaching and Learning in all subjects. Through digital content, the Government aims to engage students and enhance their understanding. Laptops with pre-loaded digital content in Mathematics and Science subjects are also being supplied to schools.

Technology Assisted Learning Programme (TALP) from 2016-17 with an objective to complement normal classroom teaching with ICT enabled Teaching and Learning in all subjects as well as to ensure digital literacy for all Secondary School students for enhancing learning achievement. TALP is an integration of the existing technology assisted programmes of the department such as EDUSAT, Computer based learning under SSA, Tele-Education and ICT- 3. Use of digital contents in the form of e-content is promoted under TALP to engage the interest of students and enhance their understanding. The Department has mapped the available digital resources in Mathematics and Science subjects to the state curriculum under various programmes such as Karnataka Open Educational Resources, EDUSAT, Radio, Tele-Education, Amrita O'Labs, Agasthya Foundation Science Experiments and many more.

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A Knowledge Map on Technology Assisted Learning Programme (TALP) in Education

Guiding Questions:

1. How isTALP actually being used in education?
2. What do we know about the impact of TALP on student learning?
3. What do we know about the impact of TALP on student motivation and engagement for learning?

TALP actually being used in education

1. **It is generally believed that TALP can empower teachers and learners, promote change and foster the development of '21st century skills, but data to support these beliefs are still limited:** There is widespread belief that TALP can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills. However, there are currently very limited, unequivocally compelling data to support this belief.

2. **TALPis very rarely seen as central to the overall learning process:**Even in the most advanced teacher classes, TALP is generally not considered central to the teaching and learning process. Many TALP in education initiatives in schools seek (at least in their rhetoric) to place TALP as central to teaching and learning.

3. **An enduring problem: putting technology before education:** One of the enduring difficulties of technology use in education is that educational planners and technology advocates think of the technology first and then investigate the educational applications of this technology only later.

Impact of TALP on student achievement

1. **The positive impact of TALP use in education has not been proven:** In general, and despite thousands of impact studies, the impact of TALP use on student achievement remains difficult to measure and open to much reasonable debate.

2. **Positive impact more likely when linked to pedagogy:** It is believed that specific uses of TALP can have positive effects on student achievement when TALPs are used appropriately to complement a teacher's existing pedagogical philosophies.

3. **'Computer Aided Instruction' has been seen to slightly improve student performance on multiple choice, standardized testing in some areas:**Computer Aided (or Assisted) Instruction (CAI), which refers generally to student self-study or tutorials on PCs, has been shown to slightly improve student test scores on some reading and math skills, although whether such improvement correlates to real improvement in student learning is debatable.

4. **Need for clear goals:** TALPs are seen to be less effective (or ineffective) when the goals for their use are not clear. While such a statement would appear to be self-evident, the specific goals for TALP use in education are, in practice, are often only very broadly or rather loosely defined.

5. **There is an important tension between traditional versus 'new' pedagogies and standardized testing:**Traditional, transmission-type pedagogies are seen as more effective in preparation for standardized testing, which tends to measure the results of such teaching practices, than are more 'constructivist' pedagogical styles.

6. **Mismatch between methods used to measure effects and type of learning promoted:**In many studies, there may be a mismatch between the methods used to measure effects and the nature of the learning promoted by the specific uses of TALP. For example, some studies have looked only for improvements in traditional teaching and learning processes and knowledge mastery instead of looking for new processes and knowledge related to the use of TALPs. It may be that more useful analysis of the impact of TALP can only emerge when the methods used to measure achievement and outcomes are more closely related to the learning activities and processes promoted by the use of TALPs.

7. **TALPs are used differently in different school subjects**
Uses of TALPs for simulations and modeling in science and math have been shown to be effective, as have word processing and communication software (e-mail) in the development of student language and communication skills.

8. **Access outside of school affects impact:**The relationships between in-class student computer use, out of class student computer use and student achievement are unclear. However, students in classroom reporting the greatest amount of computer use outside school are seen in some studies to have lower than average achievement (the presumption is that high computer use outside of school is disproportionately devoted to computer gaming).

9. **Users believe that TALPs make a positive difference**: In studies that rely largely on self-reporting, most users feel that using TALPs make them more effective learners.

Impact on student motivation

1. **TALPs motivate teachers and students:**There appears to be a general consensus that both teachers and students feel ICT use greatly contributes to student motivation for learning.

2. **Access outside of school affects user confidence:**(Not surprisingly) Students who use a computer at home also use them in school more frequently and with more confidence than pupils who have no home access.

3. **Where to place computers has an impact:**Placing computers in classrooms enables much greater use of ICTs for 'higher order' skills than placing computers in separate computer laboratories (indeed, fewer computers in classrooms may enable even more use than greater numbers of computers located in separate computer labs). Related to this is an **i**ncreasing attention given to the use of laptops by both teachers and students (and in some places, 'computers-on-wheels'), as well as, to a much lesser extent, to the use of personal digital assistants and other mobile devices.

4. **Models for successfully integrating TALP use in school and after school hours are still emerging:**There are few successful models for the integration of student computer use at home or in other 'informal settings' outside of school facilities with use in school.

5. **The appropriate ages for introducing computers to students are hotly debated:**On a general level, appropriate ages for student TALP use, in general, are unclear. However, it is clear that certain uses are more or less appropriate, given student ages and abilities. Emerging research cautions against widespread use at younger ages.

6. **TALPs can promote learner autonomy:**Evidence exists that use of TALPs can increase learner autonomy for certain learners.

7. **Gender affects impact:**Uses of TALPs in education in many cases to be affected by the gender of the learner.

8. **The 'pilot effect' can be an important driver for positive impact:**Dedicated TALP-related interventions in education that introduce a new tool for teaching and learning may show improvements merely because the efforts surrounding such interventions lead teachers and students to do 'more' (potentially diverting energies and resources from other activities).

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