

8. IMPLEMENTATION OF VIRTUAL LABORATORY (E-LEARNING CENTRES) TO IMPROVE THE QUALITY OF EDUCATION IN THE BACKWARD TALUKS OF KARNATAKA

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Funded by : KSTePS, DST-GOK

Background:

Under the Special Development Programme (SDP) of Government of Karnataka, Department of Planning, Karnataka Science and Technology Promotion Society (KSTePS), Department of Science and Technology, Government of Karnataka (DST-GOK) and Karnataka State Council for Science and Technology (KSCST), Bengaluru are jointly establishing Virtual laboratories (E-Learning Centers) in 10 high schools in the backward talukas of Karnataka as a pilot-study.

Objectives of these laboratories are to improve the quality and effectiveness of education by collaborative learning and teaching process through IT gadgets. The students will learn science experiments, inculcate scientific attitude and spread the same in their neighborhood schools.

A Virtual laboratory is an advanced learning environment created using internet, computers, and supplemented with video conferencing devices in the classroom. A virtual learning environment is a system that creates an environment designed to facilitate teachers' management of educational courses for their students, especially a system using computer hardware and software, which involves distance learning.

Progress:

1. The Virtual Laboratory high schools are successfully utilizing the digital contents provided by KSCST in Mathematics, Science and Social science subjects and teachers and students were requested to provide digital contents for English subject.
2. KSCST has taken all the necessary steps to provide digital Virtual 3D Science experiments from Biology and Physics. KSCST has installed virtual 3D science experiments in each VL High School and training has been provided for each of the teachers for usage and demonstration of science experiments and the students have benefitted from this package.
3. KSCST has procured English Magic SLL communication package for all the high schools from Karadi Path Education Company Pvt. Ltd. KSCST and Karadi Path has trained all the teachers about usage of manual in communication English language package and they will be completing the first year of the programme by February 2016. As per the feedback provided from the teachers, the students are very much benefiting from this package and interested in participating in this programme.

4. KSCST has also installed new digital contents for Science, Social Science and Mathematics procured from Swami Vivekananda Youth Movement (SVYM) and updated in the new content management front-end.
5. KSCST organized interaction programme with all 10 established VL High School Teachers on 18th December 2015 at Prof. M.A Sethu Rao Conference Hall, KSCST, IISc Campus, Bengaluru.
6. During the interaction with the teachers, all the VL School teachers opined that they require a Laptop system to store newly available digital contents and teach the same to the students and a storage rack to safely keep the hardware provided by KSCST.
7. KSCST has got permission from KSTePS GOK for naming all VL in the name of “Sir C. V. Raman Virtual Lab (Vijnana E-Kalika Kendra)” and formal inauguration of 8 centers has been done by inviting Eminent Scientists / Technologists / Administrators and others. Two centers - Kudur and Madhugiri will be inaugurated shortly.
8. Information Brochure for Virtual Laboratory, information Panels was prepared and hosted during India International Science Congress held at IIT, Delhi on 4 - 8th December 2015 and 103rd Indian Science Congress held at University of Mysore, Mysore on 3 - 7 January 2016.
9. KSCST has initiated to establish Virtual Laboratory in Government High School, Huskur, Malavalli Taluk, Mandya District and will be completed during March 2016.
10. KSCST has initiated to provide Computer Hardware which was stolen in Government High School, Jahageer Gudadur, Kushtagi (T), Koppal (D) with minimum requirements along with digital contents for the benefit of the rural students out of the funds available under the project.
11. KSCST has initiated to develop new 3D experiments relevant to 9th and 10th Standard Science Syllabus and provide to all 10 Virtual Lab established in Government High Schools across the state.

The Executive Secretary, KSCST made a presentation on progress and successful implementation of VLs before the Ad-hoc Task Force (ATF) Expert Group on RFD, chaired by Sri S. V. Ranganath, IAS (Retd), former Chief Secretary to Government, Govt. of Karnataka. The committee suggested “to consider scaling up the programme and to involve industries to fund for the programme under CSR. One school in each taluk shall be taken up for implementation to cover all 176 taluks by adopting latest technology”.



Virtual Laboratory Class room



Virtual Laboratory Activities