KERALA INFRASTRUCTURE AND TECHNOLOGY FOR EDUCATION

ANNUAL REPORT 2021-22

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1. Introduction

Kerala Infrastructure and Technology for Education (KITE) is a Kerala State Government enterprise, setup to foster, promote and implement modernisation of educational institutions in the State of Kerala. Through its operation spanning two decades, KITE has revolutionised the education system of the State. Its spectrum includes Information & Communication Technology, Capacity Building, Content Development, Connectivity, e-Learning, Satellite based education, Support and Maintenance mechanism, e-Governance or also physical infrastructure upgradation of schools. KITE pioneered use of FOSS (Free and Open Source Software) in Education. Through the Rs.493.50 Cr Hi-Tech School in 4752 Secondary schools and Rs.300 Cr Hi-Tech Lab in 11275 Primary schools, KITE has transformed the public schools into Centres of Excellence, benefitting to 16026 schools and covering 4.5 million students from classes 1 to 12. The mandate of KITE goes beyond IT & School education and now include general infrastructure building in Higher education also. www.kite.kerala.gov.in

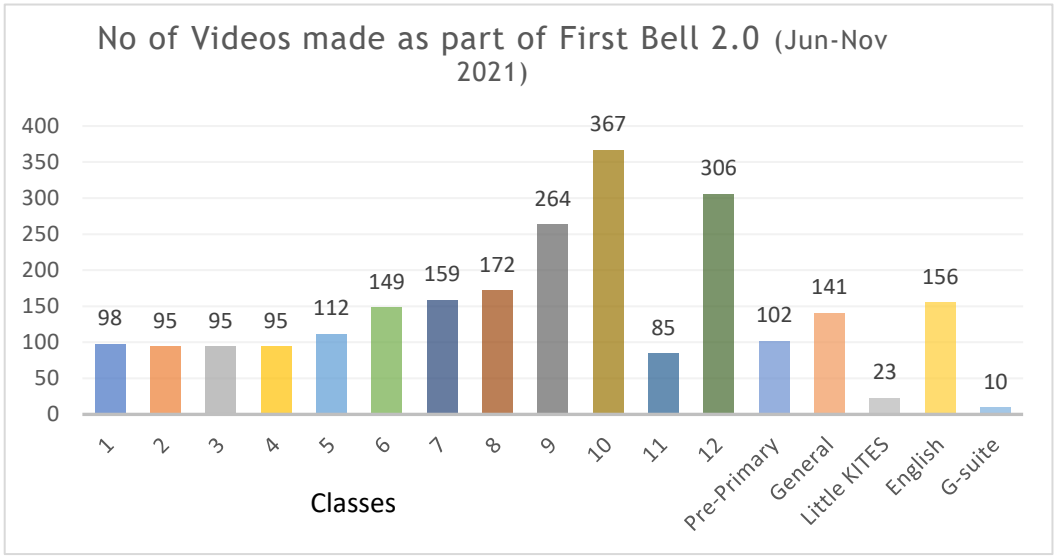
KITE VICTERS is the complete educational channel of KITE which is operational since 2006. VICTERS was inaugurated by H.E. A P J Abdul Kalam the President of India on 28th July, 2005 in Thiruvananthapuram and the channel was inaugurated by Hon. Chief Minister of Kerala on 3rd August 2006. The channel which is telecast for 24X7, is unique in the sense that it caters to students & teachers on a need-based manner, and programs are aired on demand, sensitive to school curriculum and even timetable. KITE VICTERS covers over 93% of entire households in the State. VICTERS is now available in all DTH networks in addition to Cable networks, Live streaming via www.victers.kite.kerala.gov.in and even as a Mobile App which is available in PlayStore and Apple Store.

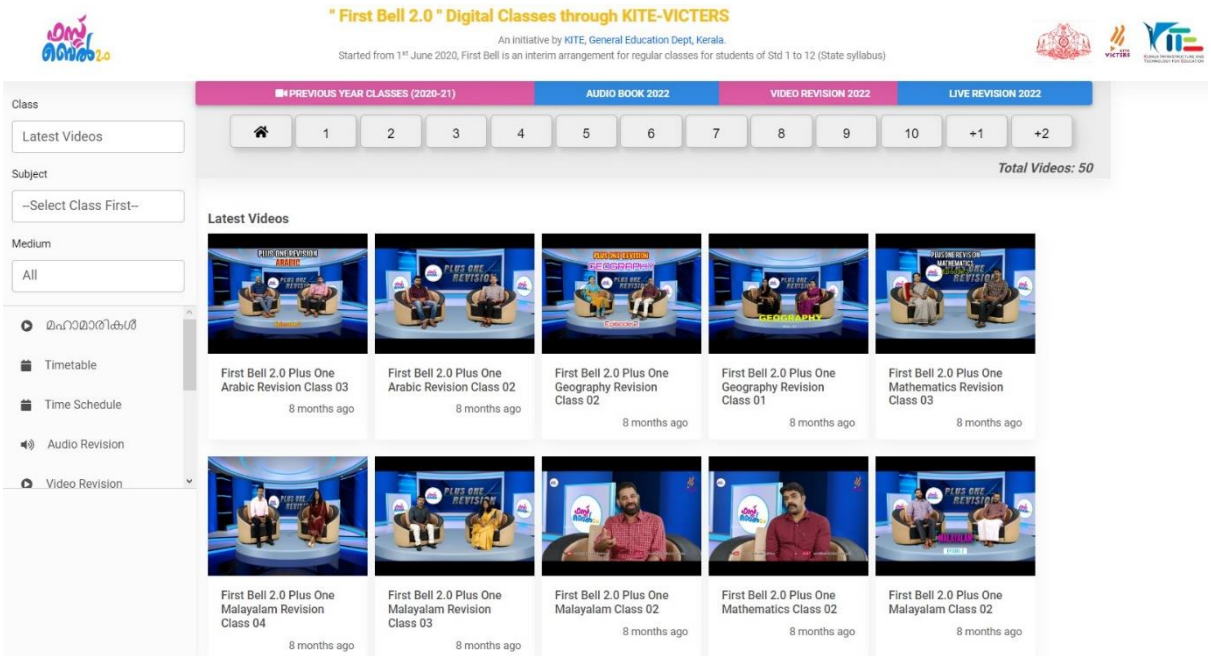
KITE has its State Office at Thiruvananthapuram, which also houses the Main Studio and Uplinking Station of KITE VICTERS. It also has district offices in each of the 14 districts, which also act for Content Production for the channel.

2. Important programmes implemented in 2021-22

A. First Bell 2.0

In June 2021, Government decided to continue the Digital Classes until the schools reopen since the Covid-19 pandemic has not settled down. Accordingly, the 2nd version of First Bell classes titled First Bell 2.0 was launched from 1st June 2021. Like in the previous year, KITE was assigned with the development and telecast of Digital Classes through its KITE VICTERS educational channel. This continued until the end of academic year and over 18000 digital classes were developed and aired through the channel. All videos were uploaded in www.firstbell.kite.kerala.gov.in



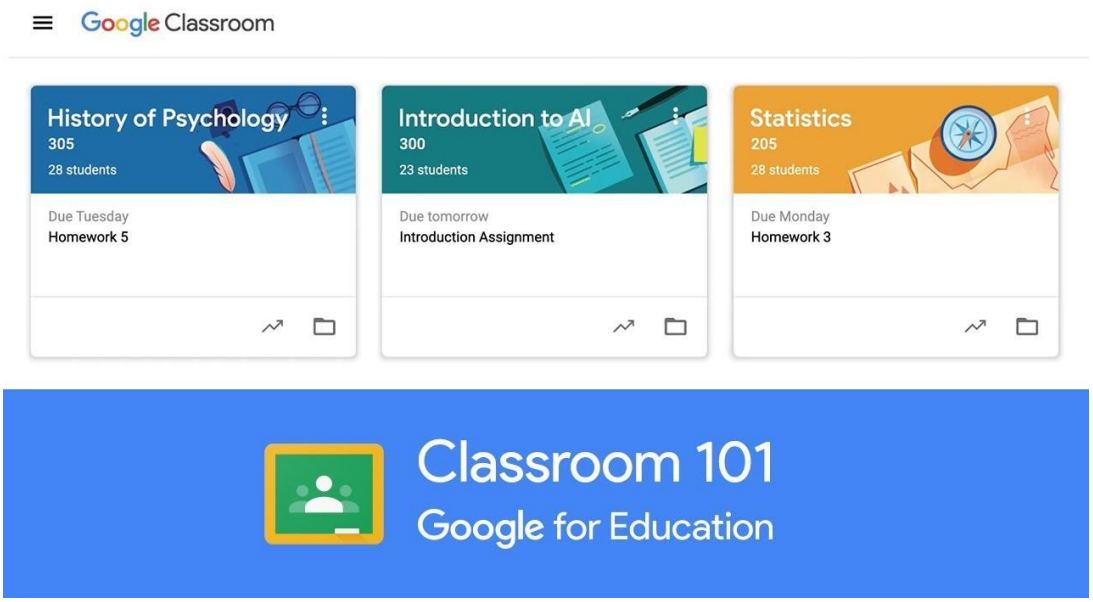


B. Online Classes using customised GSuite platform.

In addition to First Bell digital classes, it was also decided to start Online classes to bridge the learning gap of students. Government approved the proposal putforth by KITE for rolling out a customised GSuite platform for Online Classes, without any financial commitment but ensuring the privacy and security of students and teachers. The need of the hour to implement a platform which would provide Online Classes to 40 Lakhs + students in the State of Kerala. As the expected user base of the application is close to 50 lakhs, it was essential that the proposed solution should have necessary cloud storage and be vendor neutral in addition to being secured and should facilitate monitoring, safe content delivery, easy teaching-learning process and follow-up mechanisms. Even though there were certain Video Conferencing applications available for public, the requirement was an application which should have a holistic integration of the factors such as Scalability to a large group, Customisable with requirement of Education Department, ensuring privacy and non-sharing of personal information, should not incur high cost, should have platform security restricting intruders and finally it should be compatible with the existing e-learning platforms of KITE such as Samagra, School Wiki, KOOL and First Bell Digital Classes.

Based on the inputs from KITE, Google India customized their Google Workspace for Education (GSuite) platform for KITE by creating a separate domain viz kiteschool.in. A State admin was created as the Super User. Below that there were 14 District admins and school admin. The user id for teachers were created using their PEN (Permanent Employment Number) while that of students was a combination of their Admission number and School Code. A separate user account was created for Principal / Head Master at school level for management and monitoring of school level users. 20 lakh students and 1 lakh teachers were logged in to this platform and was used effectively. In the first phase, the initiative was rolled out to Std 8, 9

and 10. In the second phase, it was expanded to Class 12. In the third phase, Class 11 has also been included. A total of 5321 schools made use of this facility for Online Classes and with the monitoring mechanisms on board, the Department officials were able to monitor the progress of each school and teacher on a regular basis.



C. KITE VICTERS Plus- The 2nd Channel of KITE VICTERS

KITE launched a 2nd channel under KITE VICTERS viz KITE VICTERS Plus, to maximize the reach of First Bell Digital Classes and to ensure telecast of more classes for Students. It was difficult to include classes of all subjects from Pre-Primary to Class 12 in the telecast slots of a single channel from 6 AM to 11 PM. It was in this scenario that the 2nd channel was launched using the available bandwidth. Chief Minister launched the logo of KITE VICTERS Plus logo on 23.09.2021 and test transmission was commenced thereafter.

D. Additional Covid-19 prevention measures undertaken by KITE VICTERS

KITE VICTERS also telecast Live Phone-In cum programme programme titled, 'Athijeevanam' wherein the callers to this programme were able to interact with experts and doctors on respective areas on queries related to Covid-19 testing, quarantine, home isolation, treatment guidelines etc. The topics also included Back to Basic Campaign, preventive measures to be adopted, use of SMS (Soap, Mask and Social Distancing), Different campaigns like Break the Chain and Back to Basic, Covid Vaccination, different vaccines, their protection, effectiveness and dosage details, Registration procedure for vaccination, Virus mutation and e-Sanjeevani Telemedicine.

E. Deployment of additional Laptops as part of Vidyakiranam programme

KITE had earlier deployed 45313 Laptops to all SC students and ST students of Std 10 & 12 as part of Vidyakiranam programme. Subsequently 477 Laptops were also deployed to schools in Thiruvananthapuram and Wayanad by making use of CSR funds received as part of this programme. The distribution was launched at Cotton Hill School, Thiruvananthapuram on 31st March 2022.

F. E^3 English programme

Government vide GO (Rt.) No.804/2020/G.Edn dated 17.02.2020 has accorded sanction for the E^3 (Enjoy, Enhance & Enrich) English programme for enhancing and enriching the English language proficiency of students by making use of Hi-Tech lab facilities in schools. The three-pronged project has three components viz Samagra e-Library, e-Language Lab and e-Broadcast. Over 300 English stories have been developed for Samagra e-Library in association with Pratham Books. The offline portal for e-Language lab has been completed, which comprises of reading cards, audio clips and work sheets. Videos of stories have been developed in KITE VICTERS channel for e-broadcast.

The E3 (Ecube) English eLanguage Lab programme was inaugurated on 11.03.2022 at Govt UPS, Poojapura, as part of the 100 days programme of the Govt. The Language lab digital interactive multimedia software was developed by KITE in accordance with the prevailing curriculum and learning processes helping students to learn English in the edutainment format. The e-library is a digital library of international quality English books on the Samagra portal. Digital copies of books that children can enjoy and improve their language are made available in this library. Next is e-Language lab, which has the language lab software developed by KITE in Moodle platform that provides opportunities for students to hear English, talk, read, and write depending on their learning capability. The third component is the e-Broadcast, which includes programmes on KITE Victers educational channel that helps students learn how to use English in practical situations through interactive mode.

G. Vocational Higher Secondary Education shifts completely to Free Software

Kerala had made full use of Free Software in Education by even adopting FOSS alternatives to all proprietary applications. The highlight of the State being able to save as much as Rs.3000 Cr with the use of FOSS based Operating System in over 2 lakhs computers deployed in school was lauded globally earlier. For the first time in the Country, the software for job roles for the National Skills Qualification Framework (NSQF) in Vocational Higher Secondary schools was completely shifted to Free Software. As part of this,13 courses aimed at Job oriented teachers were included in the KOOL (KITE's Open Online Learning) platform and teachers were trained in them.

H. Satyameva Jayathe- Digital Media and Information literacy training

Specific training programmes and refresher trainings were conducted for students as part of the Digital media Literacy Campaign was launched in 2021-22. School level camps were conducted to nurture the Fake news identification skills among children. KITE completed the training of trainers in 2555 High Schools which included 12554 Govt teachers, 20506 Govt Aided teachers and 2163 UnAided teachers totaling to 35223 teachers.

I. Audio Books and Revision classes

In continuation to the First Bell Digital Classes aired through KITE VICTERS channel, the Audio Books for the revision portions for Class 10 and 12, were developed and made available in the First Bell portal. The Audio books are designed in such a way that revision of all subjects of Std 10 can be completed within 10 hours. The Audio Books for Plus Two classes, with an average duration of 1.5 hours per subject were also released. All revision classes in audio books made available in the First Bell portal shall be heard in an enjoyable way like listening to a radio programme and are easily downloadable and shareable in mp3 format. The Audio Books can also be downloaded through QR Codes. KITE also issued necessary direction to the officials concerned to extend the broadband internet facility provided to schools as part of Hi-Tech school project for downloading the Audio Books for the needy students. Kerala has taken a huge leap in ensuring Digital Inclusion by incorporating Audio Books for comfortable listening to all students with special emphasise to visually challenged kids along with Sign adapted classes for hearing impaired kids.. With the inclusion of the Audio Books, the First Bell programme has indeed created a new model of Digital Inclusion without any limits, for the first time in the Country.

J. KOOL training platform for teachers

KITE has been imparting various ICT trainings for teachers through the KOOL (KITE's Open Online Learning) platform. During 2021-22, over 20,000 teachers were trained in various ICT courses.

K. New version of KITE's FOSS based Operating System suite KITE GNU/Linux

In March 2022, Chief Minister released the OS Suite of KITE GNU/Linux 20.04. This Operating System suite can be used as a complete computing platform not only by students and teachers in schools, but also in home computers, Government offices, DTP centers, Software developers etc.

The KITE GNU Linux Operating System 20.04 has all the important updates till date of the popular Ubuntu OS. The updated Operating System suite features a large collection of Malayalam Unicode fonts which help in Malayalam Computing, DTP Graphics Image Editing software, Sound Recording- Video Editing 3D Animation packages, IDEs for programming, Database servers, Desktop version of mobile apps etc. Further, the OS also contains internationally acclaimed FOSS applications like GeoGebra and GCompris which help learn different subjects using IT. The State had made full use of Free Software in Education by even adopting GNUKata instead of Tally, the proprietary accounting application which is license based. Another key highlight of the KITE GNU Linux 20.04 is the inclusion of LibreCAD instead of the heavily priced AutoCAD widely used for Engineering Courses. Further the OS also includes Scribus which can be used for DTP purposes.

3. Status of Funds

An amount of ₹ 30 Cr was earmarked for KITE (IT) under the Plan Funds of State Govt under the Head of Account- 4202-01-202-80 for 2021-22. Out of which an amount of Rs.18.41 was released to KITE in 2 installments. The expenditure incurred was as follows;

Sl. No.	Components	Amount approved (Rs.Cr)	Amount sanctioned (Rs.Cr)	Expenditure as on 31.03.2022 (Rs.Cr)
1.	ICT Hardware Deployment and Maintenance	3	18.41	1.49
2.	Content Development	6		3.25
3.	Infrastructure upgradation	5		3.03
4.	Monitoring and Capacity Building	10		3.45
5.	Best ICT practices, Project management & eGovernance	6		5.06
	Grand Total	**30**	**18.41**	**16.28**

An amount of Rs.2.08 Cr was resumed by Govt on 31.03.2022.

4. Infrastructure Division:

The infrastructure development of the Schools has overturned to regular works after the extreme restrictions put forward by the government to harness the spread of pandemic during the financial year 2021-'22. The manpower during the restricted conditions was deployed for accelerating the documentation works that are associated with the completion of works. Even though the physical progress of the project was comparatively higher, the financial aspect has also been verified during this period for the timely submission of the RA bills and the final bills of the works.

Certain numbers of schools, where the works have been completed were facilitated as CFLTC /DCC during the pandemic circumstances. With the declaration of Kerala Government regarding the re-opening of the schools on the 1st of November 2021, observing the declined rate of spread of pandemic, remarkable progress in works has been achieved by completing and handing over of the academic buildings to the School Authorities. The financial year 2021-'22 marked the inauguration of 28 Schools & 2 Colleges, along with the completion and handing over of 67 Schools & 2 Colleges.

Further due to the non-commencement of works of 3 nos of projects under 3 Cr Scheme viz. GHSS Thirurangadi, GHSS Mangalam & GVHSS Chelari citing various issues were assessed in detail and have requested the Government for the cancellation/change of SPV. Order has been published assigning M/s KITCO Ltd as the SPV by Government vide G.O (Rt) No. 2046/2022/GEDN dated 26.03.2022 for continuing the works of GHSS Thirurangadi & GHSS Mangalam.

Status of GED projects up to 31.03.2022 is as follows:-

Details	5 Cr	3 Cr	Total
Total Projects	141	93	234
Inaugurated Projects	124	84	208
To be inaugurated	17	9	26
Completed & Handed over	106	75	181

Partially handed over	19	3	22
Total handed over	125	78	203
To be handed over	35	18	53

Colleges (HED projects)

Out of the 11 HED projects funded by KIIFB, 10 projects are progressing in a fast pace with the completion of works at 2 Colleges in Thiruvananthapuram and partial completion of 1 College in Ernakulam. Due to the extraordinary delay occurred in finalizing the design proposal and the non-commencement of works at Govt. Arts College, Thycaud, Thiruvananthapuram, KITE has requested to the Government for the cancellation and changing of SPV. Hence, vide order dated 10.02.2022, M/s KITCO Ltd. has been the assigned as the SPV for implementing the KIIFB funded project.

KITE Project - Govt. Arts & Science College Nattakom

Plan funded HED project for the Construction of Library Block, at Govt. Arts & Science College Nattakom, Kottayam, is also progressing and it is expected to complete the works by the 15th of May 2022.

Status of HED projects up to 31.03.2022 is as follows:-

DISTRICTS	TOTAL Colleges	Completed & Handed over	Partially Handed over	Balance Projects
Malappuram	1	0		1
Thrissur	3	0		3
Ernakulam	1	0	1	1
Kottayam	1	0		1
Thiruvananthapuram	5	2		3
Total	**11**	**2**	**1**	**9**

Status of Financial Progress

With the physical progress attained for the infrastructure projects of 244 KIIFB funded projects, an overall payment released to Contractors till 31.03.2022 amounts up to ₹736 Cr. Out of this an amount of **₹222.81Cr** [from 01.04.2021 to 31.03.2022] has been released to Contractors for the financial year 2021-'22. The Revised Estimate of total projects comes up to ₹1019.5 Cr and the overall financial progress of the projects has attained 72%.

Status of funds for the KIIFB projects [Amount in Cr.]

Scheme	Category	Schools / Colleges	KIIFB funding	Other funds	Total funds	Payment released till 31.03.2022	RE Amount as on 31.03.2022	% of payment released so far
Centres of Excellence	5 Cr	141	705	3.27	708.27	466	945	73%
Betterment of Infrastructure facilities	3 Cr	93	279	3.66	282.66	223		
Augmentation of Infrastructure facilities in Colleges	HED	10	75.06	0.75	75.81	47	74.5	63%
Total		244	1059.06	7.68	1066.74	736	1019.5	72%

Selected photographs of School Infrastructure upgracation projects completed by KITE.

5. Recognition for KITE during 2021-22

During 2021-22, KITE won the Technology Sabha Award, mBillionth Award, Social Media for Empowerment Award and eGovernance Champion Award for its First Bell Digital Classes.