MAJOR COMPONENT   - Quality Interventions

SUB-COMPONENT   - Funds for Quality (LEP, Innovation, Guidance etc)

ACTIVITY MASTER   - Project - Innovative Activities (Secondary & Sr. Secondary)

ACTIVITY   - Connected Classrooms with Digital

1. Progress Report in r/o Connected Classrooms with Digital 2018-19

52. Project – Innovative activities (Secondary & Sr. Secondary)-

52.ak Connected classrooms with Digital Boards- Connected classrooms are being established in about 255 Govt. Schools by providing Chrome books to students. Total expenditure incurred was Rs.700.49068 lakh.

	Activity		Proposed In Rs. Lakh		Expenditure In Rs. Lakh	
52	**Project - Innovative Activities (Secondary & Sr. Secondary)**		**Phy.**	**Fin**	**Phy**	**Fin**
	52.ak	Connected Classrooms with Digital	1019	2802.25	255	700.49068

2. Proposal for Connected Classrooms with Digital in AWP& B-2019-20

b. Establishment of Connected Classroom for the Government (DOE) Schools

Connected classroom is a "Technology Enabled" learning environment where student learning and interaction with the teacher and peers are fully supported through strategic use of ICT tools. This is a solution where a teacher can bring the day's educational topic to life , engaging students and creating an environment that's ripe for learning. A Connected Classroom integrates modern & trending technology resources into students' daily learning activities. Teachers provide opportunities for students to critically think, collaborate, and solve problems while building 21st century skills. Additionally, a

Connected Classroom enhances the student/teacher relationship by allowing teachers the ability to provide instant feedback, opportunity for blended or flipped instruction, and access to learning outside of the traditional setting.

Benefits of Technology Integration in Education:

- Transforming the teaching - learning as educational technologies enhances the communication and collaboration among the teachers, students and administrators of the school
- Technology integration in education inspires students to become creators of their own learning by incorporating 21st century skills such as creativity and critical thinking
- Accelerated learning through differentiated instruction and a broader set of learning resources
- The teaching strategies based on educational technology make learning more interactive, effective and interesting for students

Expected Outcomes:

- Different style of imparting knowledge: Incorporating technology tools to the classroom environment will positively change the way of teaching. It gives the excellent opportunity to teachers to impart knowledge to students and at the same time it also simplifies the teaching -learning process for students and teachers.
- Improved thoughtful skills: It shifts the classroom experience to a more collaborative environment so that learners start thinking in more logical and improved way.
- Increased Student involvement: Students who normally do not raise their hands in class or the back-benchers, or somewhat if they are weak, now can take interest to learn something new as these modern age tools provide more understanding to them as all the senses begin to involve in the connected class rooms. By fostering discussions and developing new and out-of-the-box ideas, technology also helps improve the student- teacher bond.
- Updating with online information: Teachers can utilize the various online information such as knowledge databases, online audio-video and worldwide resources to strengthen their lessons and classroom teaching. Students and learners can quickly access the wide range of powerful and resourceful tools in their respective fields and resources to conduct their academics.

- Wide connectivity in different fields and locations: Interactive technology tools and techniques allow for wide connectivity in various locations, making ideal linkages and collaboration and also provides distance learning environment.

- Interact and share: The interactive nature of technology tools provide learners an opportunity to share and participate in the teaching learning process. Classrooms with technology provide a platform for students and teachers to demonstrate their hold of the subject through touching, drawing, and writing. Every student has an opportunity to participate or contribute to the presentation and discussion.

- Teachers can do more experiment in pedagogy: As an academic professional, teaches learn more about how to effectively design and execute a class guided with technology. Whether it's a dramatic change, such as teaching with a blended or flipped-classroom, or just adopting a single tool for a specific project or term, he will learn something new in modern academia. Being well-versed in technology can also help build his credibility with students, and even with fellow colleagues.

Requirements of Connected Classroom:-

S. No.	Items	Minimum Specifications	Quantity
1	Interactive Board	Infrared & Touch Smart Board, Low Reflection 5th X 4ft with writing board (white/green) of 5ft X 4fit.	1
2	Projection System	3000 ANSI Lumens DLP/LCD Short Throw Projector with all accessories and mount kit.	1
3	Personal Computer	CPU- Corei3 (6th Gen)/1TB HDD/4GB DDR3 RAM/Windows 10 OS Optical Mouse and Keyboard.	1
4	Speakers	Amplified Stereo Speakers.	1
5	Tablets/ Laptops/ chromebooks	As per latest specifications	20
6	Charging Cart for 20 Nos Tablets	Input Voltage: AC 100-240 Volt, Output Voltage: DC 5V/2.1A, Max Load: 1000 W, Bays: Min 32, Rubber Coated Divides, Ventilation Holes each side, Power Distribution Outlet with Locking Doors.	1
7	Classroom Management Solution	Screen Broadcast, Student Demonstration, Camera Broadcast, Group Management, Group Teach & Chat, Monitor & Control, Remote Setting & Command, Quiz & Survey, File Distribution, User Application Policy & Controlling.	1
8	Wifi Router	Dual Band Wireless Gigabit Router.	1

9	Digital Content	Soft Copy of classroom contents for classes I to XII as per State Board.	1
10	Professional Development	Training of teachers including refresher for 2nd and 3rd year.	1

In this context it is worth mentioning that the items at Sl. No 1 to 4 are part of the project of Digital Board which had been sanctioned separately by the PAB and was implemented in 441 schools during the financial Year 2017-2018 and in 503 schools during the year 2018-19. Accordingly PAB had approved the project of connected class in the FY 2018-19.

Department of Education, Govt of NCT of Delhi in the PAB 2018-19 got the approval of Rs 2802.25 Lakhs for the proposal for setting up of Digital Board/ Smart Classroom at a cost of Rs 2.75 Lakh per classroom in 1019 schools. Deptt signed an agreement with EDCIL (PSE of MHRD) the implementation agency for implementing Connected Classroom Project in 944 schools of Delhi. However, due to non availability of specific chipsets the delayed supply of 25% of approved devices (2/3 per school) is being received.

Considering the feedbacks received from various stake holders, the desired impact of the connected classroom can be achieved by increasing the number of personalized learning devices for students from 2/3 per school to 20.Therefore the proposal is now for remaining devices approved in last PAB and more devices for FY 2019-20, so that there are 20 devices per school to make personalized learning possible.

Budget Provision:

S. No	Activity Description	Quantities for 112 schools	Quantities for 832 schools	Quantities for 75 schools	Unit cost (in Rs)	Total No of Schools (Physical quantities)
1	Student Devices with Devices Education License	1904 (17 per school)	14976 (18 per school)	1500 (20 per school)	27,986 per device	
2	Capacity Building of Teachers (2 days of training for a batch of 25 teachers)	112	832	75	10,832 per school	1019
3	Wireless Router	0	0	75	3,972 per school	
4	Device Cart	0	0	75	41,523 per school	

Financial Proposal

Sl. No.	No. of Device already order for school	No. of School	Additional device required	Total cost of device @27986 per device	Cost of capacity building of teachers @ Rs.10,832 per school	Cost of wireless router @ Rs.3972 per school	Cost of Device Cart @ Rs. 41523 per school	Total Cost (Rs. In Lakh)
1	3	112	17	532.85344	12.13184			544.98528
2	2	832	18	4191.18336	90.12224			4281.30560
3	0	75	20	419.79000	8.12400	2.97900	31.14225	462.03525
		1019		5143.82680	110.37808	2.97900	31.14225	5288.32613

3. <u>Recommendation of Technical Support Group (TSG) -2019-20</u>

Project - Innovative Activities (Secondary & Sr. Secondary)							
Connected Classrooms with Digital	**Phy**	**Unit Cost**	**Fin**	**Phy**	**Unit Cost**	**Fin**	Remarks
	1019	5.18972	5288.32468	1019	5.18972	5288.32468	Considered as proposed

	Activity	Proposal			Approval			**Remarks**
		Phy	**Unit Cost**	**Fin**	**Phy**	**Unit Cost**	**Fin**	
66.ak	Connected Classrooms with Digital	1019	5.18972	5288.32468	1019	5.18972	5288.32468	Considered as proposed by the state

4. <u>Approval of Plan Approval Board 2019-20</u>

c) **Project Innovation (Secondary):** An amount of Rs.**5711.365** lakh has been estimated under Project Innovation (Secondary) for various activities such as Celebration of Language festival, Open Gym, Sports Day, Coonnected classroom and smart classroom/ Digital Boards. In the connected classroom it is recommended one lab per school with 20 systems in each lab for 1019 schools with total estimated value of Rs. 5186.424 lac and smart board is recommended only for 75 schools, previously not covered with total estimated value of Rs. 82.50 lac. Details list of Schools approved for connected classroom is attached in **Annexure- IV.** List of Schools approved for Smart Classroom/Digital Boards is attached in **Annexure-V.**

(Rs. in lakh)

Activity Master	Physical	Unit Cost	Financial
Project Innovation(Secondary)			
Celebration of Language festival	2564	0.01	25.64
Open Gym	100	2	200
Sports Day	1019	0.2	203.8
Connected classroom (20 systems per school)	1019	5.08972	5186.425
Smart Classroom/Digital Boards	75	1.1	82.5
Ek Bharat Shresth Bharat	13	1	13.00
Total of Project Innovation(Secondary)			**5711.365**

5. <u>Costing Sheet of Plan Approval Board</u>

Particulars				Proposal			Final Approved Outlay		
Major Compone nt	Sub Compone nt			Activity Master	Physic al	Unit Cost	Financial	Physica l	Unit Cost	Financial
		6 6		Project - Innovative Activities (Secondary & Sr. Secondary)						
		66. ak	Connected Classrooms with Digital	1019	5.18972	5288.3246 8	1019	5.08972	5186.425