

# **DST REPORT**

## **MILESTONES 2021**



AMMACHI LABS

AMMACHI Labs with the support of the Department of Science and Technology (DST) had initiated Digital@ikya; a series of 21st Century Skills workshops for building capacity amongst Indian school children. One project titled “Empowering School children in 21st Century Skills” brought a series of workshops to schools in various regions.

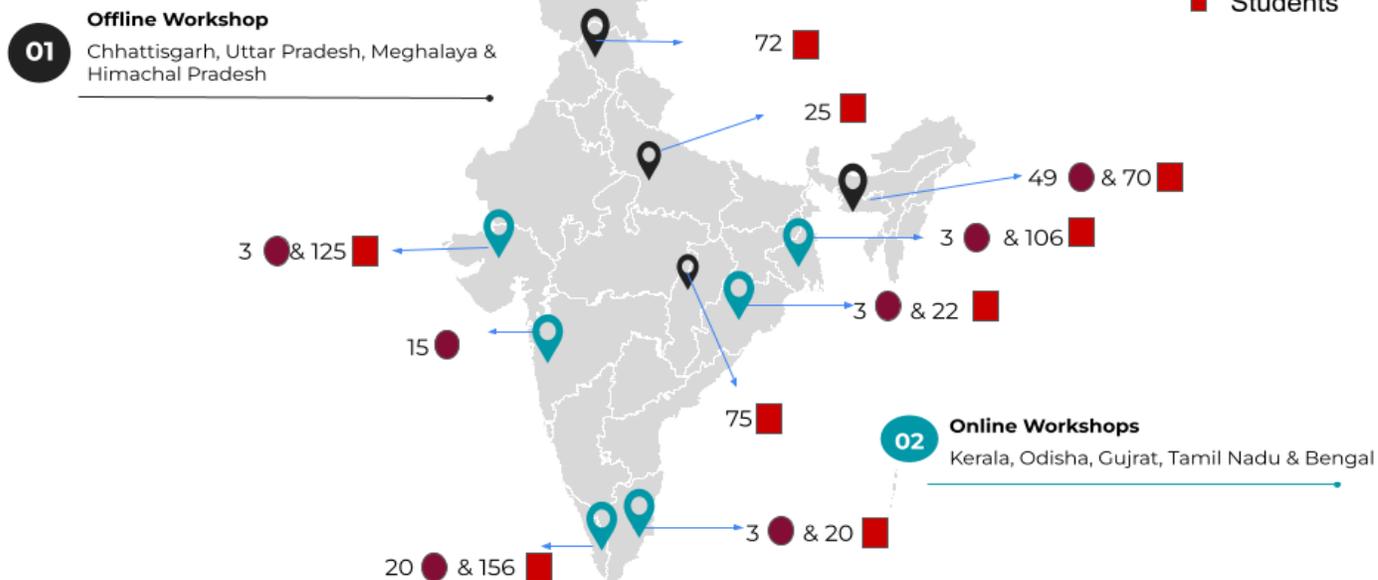
### **Online Deployment**

Due to the COVID-19 lockdown the project execution was shifted to online from offline mode. We also furthered the scope of the project by endeavoring to teach teachers who could become the torch bearers of this course material and the resource person for immediate problem solving. The online workshop sessions were conducted in schools located in Kerala, Gujrat, Odisha, Tamil Nadu and West Bengal. In preparing to deploy the online training, we undertook the following operations:

- Shortlisted schools target for the training based on certain prerequisites such as availability of computers., Infrastructure (Rooms availability), electricity etc.
- Select teachers and students who have access to smartphones.
- Select teachers with a background in or preference for or demonstrated ability in teaching that particular course.
- Send proposals to invite the Principals of the shortlisted schools to participate in the training.
- Identified the teachers to be trained recommended by the Principals and possessed the requisite basic skills.
- Conducted online TTT (Train The Trainer) sessions to train the teachers using the Google Teams platform.
- Ratified a PEP (Project Execution Plan) with the school.
- Certified teachers and students who successfully completed the training.
- Supported teachers to conduct both online and offline workshops for students at their respective schools.

## Impact

Total Participants: 96 teachers and 671



### Offline Deployment

In-person and offline deployment was conducted in Chhattisgarh, Meghalaya, Uttar Pradesh and Himachal Pradesh. As preparation for the deployment of offline training we undertook the following operations:

1. Identified eligible schools in rural communities with help of our field team.
2. Conducted pre-workshop visits to the shortlisted school.
3. Conduct the workshops for the students.
4. Executed a PEP (Project Execution Plan) with the school (Meghalaya)
5. Awarded certificates to students & teachers (TTT) who successfully completed the training.

The project was deployed in 8 states, Chhattisgarh, Meghalaya, Uttar Pradesh, Himachal Pradesh, Kerala, Gujrat, Maharashtra, Odisha, Kolkata & Tamil Nadu. We covered 242 students and 49 teachers as direct beneficiaries through in-person workshops and 364 students and 47 teachers through online workshops making the total beneficiaries count 606 students and 96 teachers.

States	Start Date	End Date	No.of Students Trained-In-Person	No. of Teachers Trained-In-Person
Chhattisgarh	24th Dec 2021	29th Dec 2021	75	
Haryana	30th Mar 2022	2nd Apr 2022	25	
Meghalaya	14th Mar 2022	22nd Mar 2022	70	49
Himachal Pradesh	9th Apr 2022	14th Apr 2022	72	
<b>Grand Total</b>			<b>242</b>	<b>49</b>

*Offline workshops timelines, number of students & teachers trained*

Year	Workshop	Dates
2021	Online Student workshop-Responsive Web Design	01.04.2021 to 08.04.2021
2021	Online Student workshop-Social Media	09.03.2021 to 19.03.2021
2021	Online Student workshop-Social Making	28.02.2021 to 06.03.2021
2021	DST Project TTT 1(Interactive media)	29.07.2021 to 04.08.2021
2021	DST Project TTT2( Interactive Media)	25.08.2021 to 01.09.2021
2021	DST Project TTT1(Responsive Web Design)	28.07.2021 to 09.08.2021
2021	DST Project TTT2( Responsive Web Design)	06.09.2021 to 14.09.2021
2021	DST Project TTT1(Social Media Competency)	25.08.2021 to 01.09.2021
2021	DST Project TTT2(Social Media Competency)	23.09.2021 to 05.10.2021

2021	DST Project TTT3 (Responsive Web Design)	14.11.2021 to 24.11.2021
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Online workshops timelines

## Impact Evaluation of Workshops on 21<sup>st</sup> Century Skills

Out of a total of seven variables, three (Team Work, Compassion, Technical Affinity) showed a significant change ( $p < .05$ ) in the hypothesized direction compared to the control group condition (no intervention). At the same time, two variables (Decision Making, and Problem Solving) show a significant change in the post-condition (right after the workshop) compared to the pre-condition (right before the WS). In the following, the results of the experimental and control group conditions are presented in the following section.

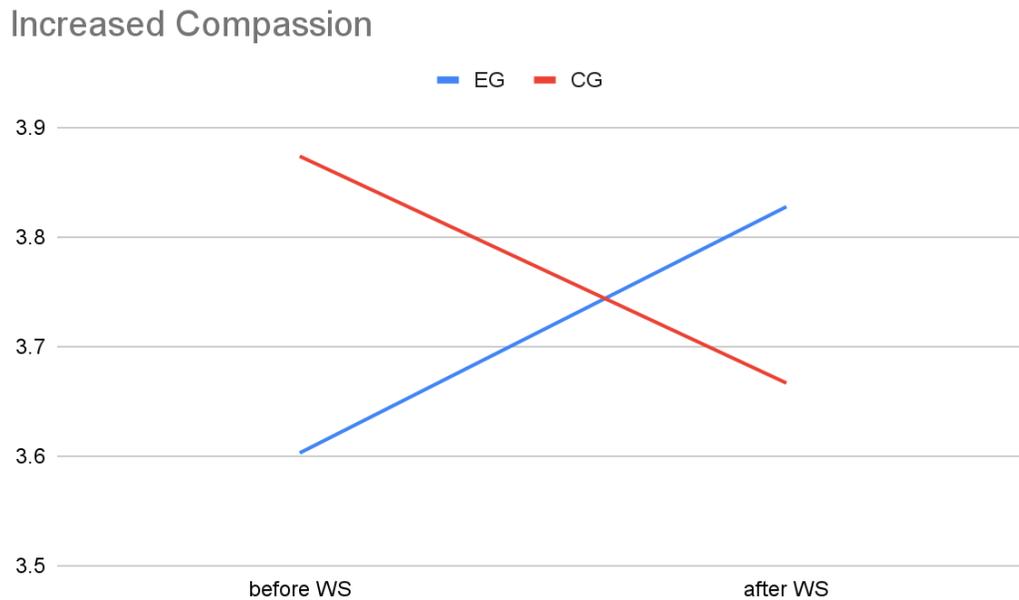
### Impact Evaluation: Results at a Glance

Results indicate significant impact of Series of Workshops on following 21st Century skills:

	Collaboration (Teamwork)	<b>*significant impact</b> Experimental - Control Group comparison
	Technical literacy (Technical Affinity)	
	Life skills (Compassion, Self-efficacy)	
	Cognitive Skills (Problem Solving, Decision Making)	<b>*significant Trends</b> Before/After Intervention

A detailed description of the results are shown in the following graphs of both the Experimental Group (EG) and Control Group (CG) comparison as well as trends for further investigations.

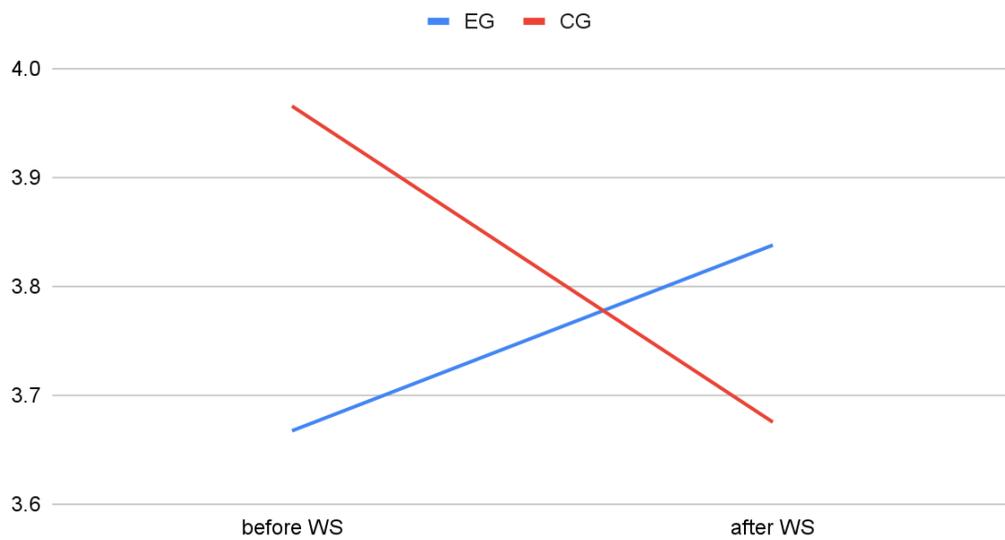
One essential quality of **21<sup>st</sup> century** skills is the ability to collaborate (Rotherhand, 2010). The results show a highly **significant increase** ( $p = .00$ ) in **Teamwork** in the EG in comparison to the CG with an effect size of eta square ( $\eta^2$ ) = .117. The impact of the intervention can therefore explain 12 percent of the variance of teamwork altogether.



One core component of Amrita's educational format is value-based education. Amrita incorporates values and life skills education in the instructional design of the interventions

implemented. The results show a **significant increase** ( $p = .036$ ) in the Experimental Group in **Compassion** in comparison to the Control group with an effect size of eta square ( $\eta^2$ ) = .043.

### Increased Technical Affinity



The intervention can therefore explain 4 percent of the variance of compassion altogether. Technical Affinity is an essential step towards the development of Digital Literacy, a key component of 21<sup>st</sup> Century skills. Therefore, the workshops aimed to increase the technical competency of the school children. The results show a highly **significant increase** (p. = .001) in the Experimental Group in **Technical Affinity** compared to the Control group with an effect size of eta square ( $\eta^2$ ) = .104. Therefore, the intervention can explain 10 percent of the variance of Technical Affinity altogether.

## Testimonials & Feedback

### 9.1 Teacher Feedback for the workshop

*"I attended the Interactive Media of the 21st century session and I learnt many concepts like animation, storyboarding, scriptwriting, how to make the video...what are the steps involved in video making and how to upload a video onto a youtube channel. These concepts I made use of while making educational videos. .. It was a very good platform to make students aware of multimedia, animation etc..students will get a deeper understanding of interactive media by this workshop.. I am thankful to the organiser of this workshop and Niksheeta Ma'am who explained all the concepts to us and to all the persons involved in making this session a success."*

Jisha Vijayan,  
Amrita Vidyalayam Kuthuparamba, Kerala

### 9.2 Student Feedback for the workshops

सर आप हमारे स्कूल में आये जो हमें बहुत  
अच्छा लगा जो हमें हमें कंप्यूटर के बारे में  
कुछ भी नहीं जानते थे जब आपने हमें दिखाया तो  
आप लोग अगले साल फिर से आना और  
हमें कंप्यूटर के बारे में बताना। और हमें कंप्यूटर  
सिखाने के लिए बहुत अच्छा लगा।

*"Sir, we really appreciate that you came and visited our school and when we didn't know anything about computers...that is when you came and taught us, please visit us next year as well. We really enjoyed learning about the computer."*

Kumari Bhuneshwari Mandavi  
10th grade  
Bijapur, Chhattisgarh

*"Om Namah shivaya !*

*I have really liked the way this workshop has been conducted. It has given me a chance to know more about animation, what it is actually and many more like how to take photos based on photography rules and make videos, edit it and club it using InShot app. It also taught me about*

*the guidelines of YouTube and how to use it safely. Thus it was a fantastic workshop to learn about Interactive Media of 21st Century Workshop. Thankyou“*

Komal Khandelwal

X-B,

Amrita Vidyalam, Kolkata

12. वीडियो मेकिंग सेसन कैसा रहा? हमें अपना अनुभव बताएं। - वीडियो मेकिंग दौरान बहुत अच्छा रहा मैंने कभी वीडियो मेकिंग नहीं किया था मुझे वीडियो मेकिंग अच्छा लगा

13. क्या आप इस तरह के और सत्रों में भाग लेना चाहते हैं? - जी हाँ भाग लेना चाहते हैं।

14. इस कार्यशाला के अलावा आप और क्या क्या सीखना चाहते हैं? - अच्छी तरह से फोटोग्राफी करना और वीडियो बनाना तथा मल्टीमीडिया के बारे में और जानना।

दिनांक:

"The video making session was very good. I have never made any videos before." "My most favorite sessions were how to take good photos and do video editing".

Yash Thakur  
10th grade  
Bijapur, Chhattisgarh

*Thank you for a great course. Great presentation style with lots of opportunities to ask questions and talk about which all made for a really enjoyable and informative course." "This has more than met my expectations." "A wonderfully practical course". Interactive Media. Thank you.*

Parvathy.L  
10th grade

## Summary

Each of our workshops went over and above the aforementioned objectives of nurturing critical thinking, enhancing communications, promoting collaborations and harnessing creativity. Through the various assignments tailored into the workshop. We gave teachers and students the knowledge, skills and tools and introduced them to the concept of responsible digital citizenship. Post completion of the workshop many teachers who would have considered themselves to be averse to technology found a platform to digitally express their creativity and a platform to showcase their newly acquired digital know-how responsibly. Many students have discovered a new found passion for creating websites or discovered their passion at digital documentation through videos and creating digital libraries on youtube. For many this workshop will be a crucial juncture which will shape their future career choices.

Through *Digital@ikya* we successfully trained 671 students and 96 teachers during the duration of the project through online and offline mode. We strongly believe this knowledge resource will now continue serving more students surviving even post the physical closure of the project through the teachers we trained across the nation.

As envisioned by the Government of India in the Digital India Mission, Digital@ikya series of workshops promotes inclusive growth, ensuring a society in which every person living in the remotest part gets the same opportunities.