



Documentation of the workshop on

WAY FORWARD IN EDUCATION THROUGH TECHNOLOGY

Date: 2nd November, 2018

Venue: Yojna Bhawan, Lucknow



HCL

HCL FOUNDATION

Contents

Executive Summary

- 1) Context setting & Situational Analysis
- 2) Enhancing learning outcomes through ICT in education
- 3) Role of teachers in enhancing teaching and learning through technology
- 4) Enabling environment for technology in Education
- 5) Experience sharing & felicitation of teachers

Annex:

- 1) Workshop programme
- 2) Registered participants

EXECUTIVE SUMMARY

This brochure documents the presentations made in the course of the workshop “Way forward in Education through technology” which took place at Yojna Bhawan, Lucknow on November 2nd, 2018.

HCL Foundation in partnership with **Basic Education Dept., Govt. Uttar Pradesh** had organized a workshop on- “**Way forward in Education through Technology**”. The idea behind this workshops was to strengthen content delivery mechanism by bridging it with technology in order to improve learning outcomes and retention level of students in primary schools.

This workshop was chaired by Dr **Prabhat Kumar (IAS), Additional Chief Secretary – Basic Education, GoUP** and **Mr Sarvendra Vikram Singh, Director – Basic Education, GoUP**. Key officials from Basic Education department and teachers / principals/ BSAs from aspirational districts of Uttar Pradesh had also participated for learning and experience sharing

The context setting for the workshop along with situational analysis of learning achievements in Uttar Pradesh was presented by Mr. Sarvendra Vikram Bahadur Singh, Director, Basic Education, Government of Uttar Pradesh followed by a panel discussion which focused on the following areas:

- Enhancing learning outcomes through ICT in education,
- Role of teachers in enhancing, teaching and learning through technology
- Enabling environment for technology in education



Lighting of the lamp by Mr. S.V. Singh, Mr. Alok Varma (HCLF), Mr. Pulkit Khare (DM Hardoi), Mr. Amit Singh (DM Sonabhadra)



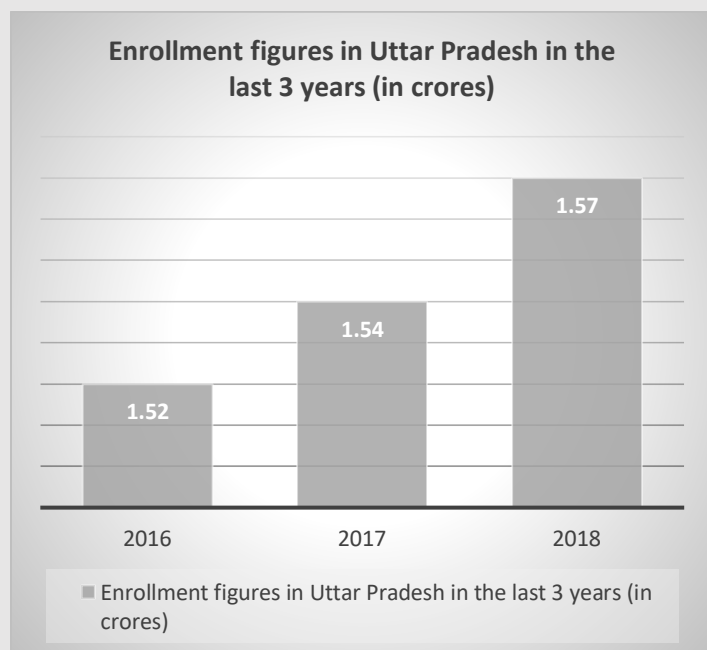
Chief Guest, Dr. Prabhat Kumar, IAS, Additional Chief Secretary addressing the audience

1. CONTEXT SETTING & SITUATIONAL ANALYSIS

Dr. Sarvendra Vikram Bahadur Singh, Director, Basic Education initiated the workshop highlighting the agenda and welcoming the teachers and government officials who had gathered together to be a part of this workshop. The initial address underlined the value of organizing a workshop on the very topical theme of 'Way Forward in Education through technology'. He began by stating that the context behind such kind of initiative had begun back in August, 2017 when two teachers had been invited in a discussion with the Basic Education Department because of their commendable efforts in implementing quality education by introducing ICT in their schools. It was an intensive discussion which received a good response and it came into the realization of the state that this kind of practice needs to be extended to a larger number of schools and as a result of various collaborative initiatives of district administration, Pira2 mal Foundation & HCL Foundation there are approximately more than 1200 schools in Uttar Pradesh today where teachers are using ICT as a means to ensure quality education in schools.

The role of teachers is crucial here along with district administration and project initiatives such as Samuday. And a change has been seen where the focus has shifted to quality education. However, what is remarkable here is that this process has started from within and has shown its impact with a drastic change in enrolment.

As per a situational analysis of enrolment numbers, back in 2016 the enrolment figure was 1.52 crore all across the state for both primary and upper primary schools. Before 2016, the state witnessed a downfall of 22 lakh students in the last five years due to migration from government to private schools. In the last one year prior to 2016, the state lost 5 lakh students and this became a matter of grave concern for the state.



Collective actions, agendas & initiatives like School Chalo Abhiyan came into limelight along with the idea of digitalized classrooms thereby showing a 'trend reversal' in the subsequent year leading to an increase of 2 lakhs students bringing the total enrollment figure of 2017 to 1.54 crores.

The enrolment figure of the current academic year is 1.57 crores and is a remarkable growth in terms of impact that has been created in the state and the efforts of teachers in order to bring this kind of change is commendable.

2. ENHANCING LEARNING OUTCOMES THROUGH ICT IN EDUCATION

The agenda behind the panel discussion was to understand the role of ICT in enhancing learning outcomes through ICT based content. It is a thorough process and has several stages to it. Once the need analysis is done and a sustainable model is planned, it becomes important to ensure that the teachers are trained intensively on the ICT module since most of them come from traditional ways of teaching and learning. These training workshops are done on content delivery mechanisms, device operations and activity based learning modules where the idea is to increase retention level among students. The discussion revolved around different kind of practices involved in order to create a platform where digital learning has set an example of improved learning outcomes.

The panelists were representatives from British Council of India, Shiv Nadar Foundation, Samuday (HCL Foundation) & IT for Change.

BRITISH COUNCIL OF INDIA

Parul Gupta, Head- Gender from British Council of India discussed intensively about the role of ICT in education and highlighted findings from teachers training on ICT. She has more than 15 years of experience in the education sector. For more than 7 years she has been working on the UK India bi-lateral programmes aimed at fostering cultural relations between India and the UK. She is currently heading the E-QUAL project funded by the European Commission. She is responsible for providing leadership and strategic direction to the project. Before joining this role, she was a part of the UK India Education and Research Initiative (UKIERI) funded by the Government of UK and India. **India requires technological intervention to deliver education to the huge mass of new learners and British Council is aiming to establish smart schools and provide computer aided education in partnership with state government.** The financial support is provided by procurement of computers and peripherals along with

- training of teachers
- development of e-contents
- Internet connectivity
- set up of smart schools

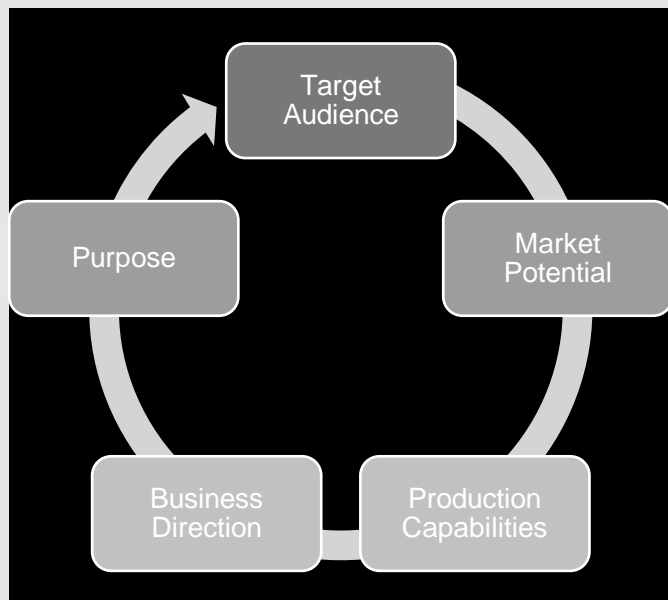
The E-QUAL project was aimed to enhance the quality, access and governance of undergraduate education in India through the joint design and production of **Open Educational Resources (OERs)**. This project was funded by the European Commission and was implemented by a consortium of partners from India, UK and Italy with British Council as the lead partner.

One of the major insights which came forward was their findings from teachers training workshops where she pointed out that teachers are reluctant to use



newer ways due to lack of technical skills to identify and emulate best learning practices. Hence a cultural shift is needed in the institutions in order to improve quality and access to engage online resources. Along with infrastructure improvement in institutions there also needs to be an awareness towards the variance in learning behavior amongst the teachers.

Need analysis of OERS (Open Educational Resources)

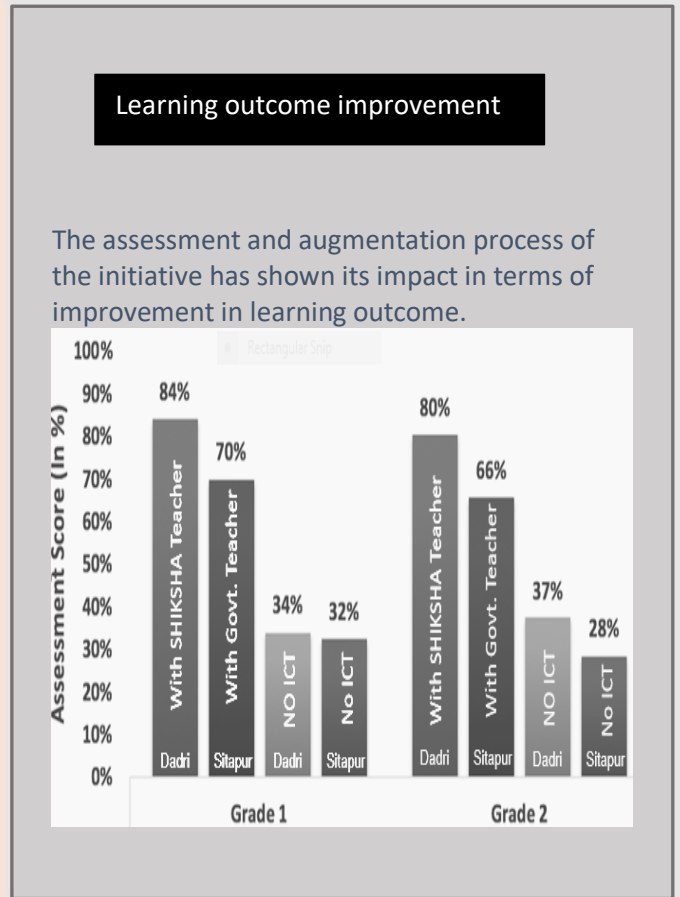
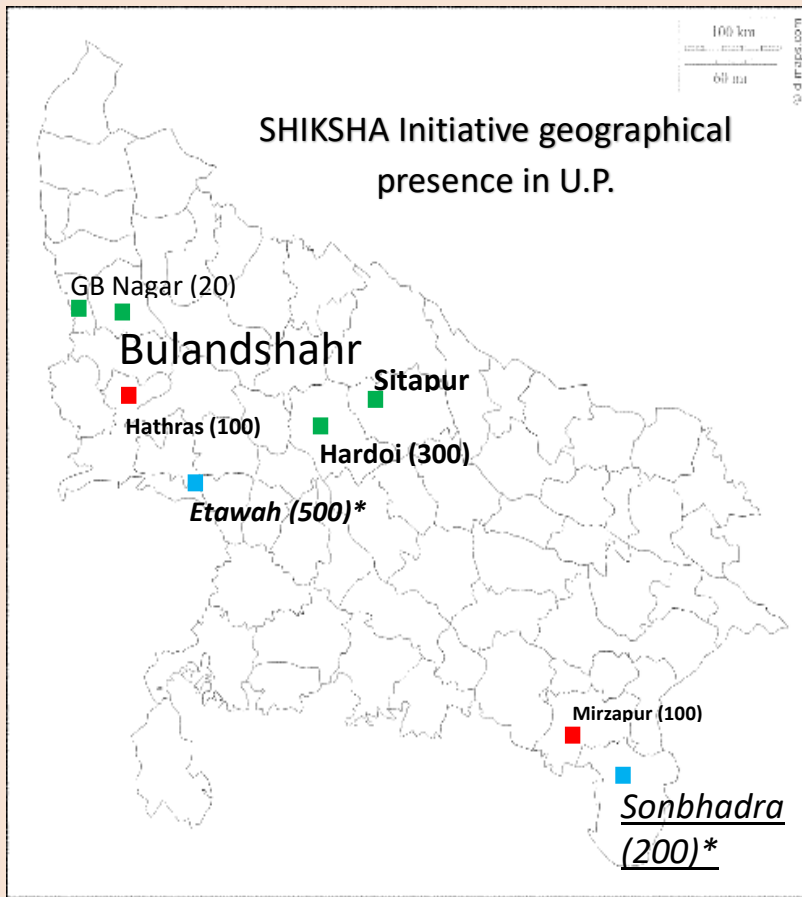


There are several stages of production of such content design & development which involves academic, technical and administrative teams. An agreement on academic content and technological platform along with license and copyright are strong action points. However, in order to ensure accessibility there should be a proper dissemination strategy so that there is a point of contact and teachers build a progressive approach towards teaching learning.

SHIV NADAR FOUNDATION

Robin Sarkar, Project Director, SHIKSHA initiative has been associated with the Shiv Nadar Foundation for over 8 years. He has been an integral part of the initiative from the conceptualization stage. Leading and mentoring the Shiv Nadar Foundation's first literacy initiative which envisions working towards eradicating of illiteracy in next 10 years. The program deals with development of digital content with instruction designing, exploring new robust technologies best suited to rural India and development of measurement and evaluation with Bloom's taxonomy.

He discussed intensively about the **SHIKSHA Initiative** which is a replicable & scalable ICT based model designed to enhance the effectiveness of education delivery for teachers in the Govt. and Pvt. rural schools. This initiative has shown its impact by increased enrolment figures and interest towards going to school. The content is exclusively designed for Grade 1 & 2 students and creates awareness about personal/public hygiene. Along with improving learning outcomes, the project has witnessed the interest of parents and community also which is a great impact. The idea is to design digitalized content for Grade 3,4 & 5 as well.



SAMUDAY, HCL FOUNDATION

HCL Samuday, established in 2014 is a flagship program of HCL Foundation to develop a sustainable, scalable and replicable model, a source code for economic and social development of rural areas.

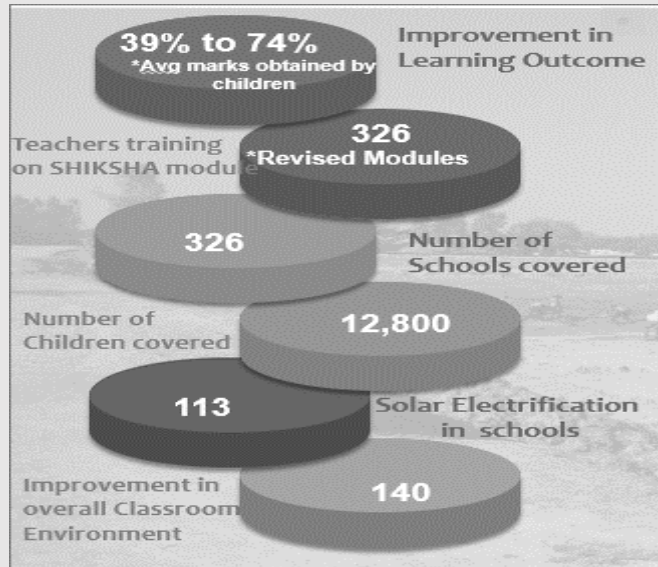


This is at present being done by working in 765 villages from 164 Gram Panchayats of Uttar Pradesh across six sectors i.e. Agriculture, Education, Health, Infrastructure, Livelihood, Water, Sanitation & Hygiene (WASH) in partnership with state government, village communities, NGO's and allied institutions. Yogesh Kumar, Head Operations, Samuday, pointed out the need for holistic development of children and accessibility to quality education in an effective learning environment. The Shiksha initiative of SNF is implemented in a scale of 326 schools all across three blocks of Hardoi district covering more than 10,000 students in an academic year. Along with digitalized content, there has been a focus on overall school environment by strengthening SMC's, provision of

library & sports material and introducing TLM to support ICT based content. The ICT content has helped in reducing dropout rates and enhancing listening, speaking, reading & writing skills.

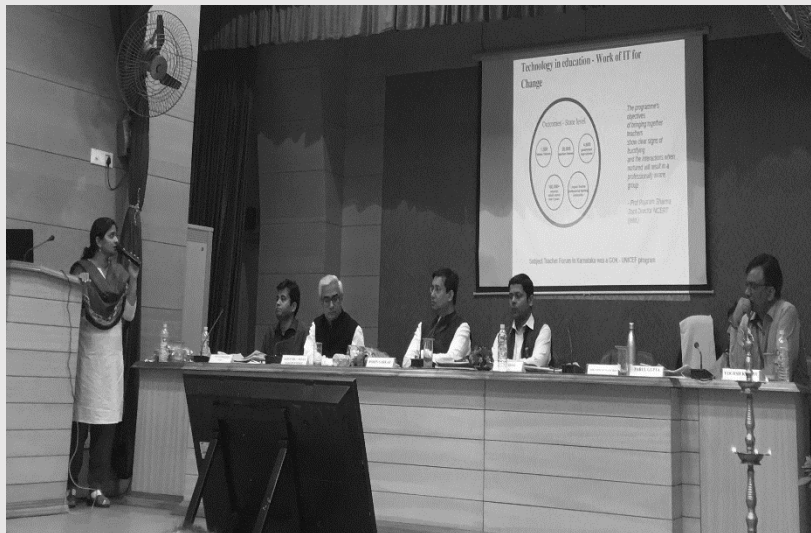
A subject wise analysis of learning levels and retention rates is done in order to develop a child to child tracking mechanism. In case of attendance a categorical analysis of students is done in order to track the seasonal variation in attendance level in rural areas. As a follow up strategy, students with low attendance are identified and retained in classrooms through feedback and counselling.

Device functionality and nugget utilization reports are generated as a monitoring mechanism to ensure proper functioning of classrooms. Periodic assessments and augmentation process keep the whole process in sync with the Shiksha initiative and in the last two years the impact has been seen at large. The idea here is empower the teachers in a manner that they become change makers of society and inspire other teachers for the same. Almost 100% students can understand the unit taught through SIKSHA (ICT) facilities and they are inclined to learn through audio-visuais. 100% parents admit that their child is excited to go school and that in itself is an impact of digitalized classrooms.



IT FOR CHANGE

Sriranjani Ranganathan has been working in the area of technology and education and has led and managed many of the projects for IT for Change. She has led the school level technology integration work in IT for Change and has co-managed the teacher development and OER creation programmes of IT for Change. As a core committee member she has contributed to the NCERT ICT curriculum and was the Chief Editor for the Telangana ICT textbook based on the same.



She has co-authored the book chapter on collaborative OER adoption practices based on the program in Karnataka & now directs a program for conservation, livelihood and education for tribal and rural communities in Chittoor.

She highlighted the status of education in the present context where learning levels remain far below gradelevels. Half the Class V children in India cannot read at Class II level and half the children finishing 8y ears of schooling cannot do basic arithmetic operations. There is a need for change in teaching pedagogies. IT for Change is implementing new models of teacher development integrating technology

embedded within the government school system and demonstrating technology integration at school level.

Technology in education - Work of IT for Change



The programme's objectives of bringing together teachers show clear signs of fructifying and the interactions when nurtured will result in a professionally aware group

*- Prof Rajaram Sharma
Joint Director NCERT
(retd.)*

Subject Teacher Forum in Karnataka was a GOK - UNICEF program

Collaborative e-content creation and publishing

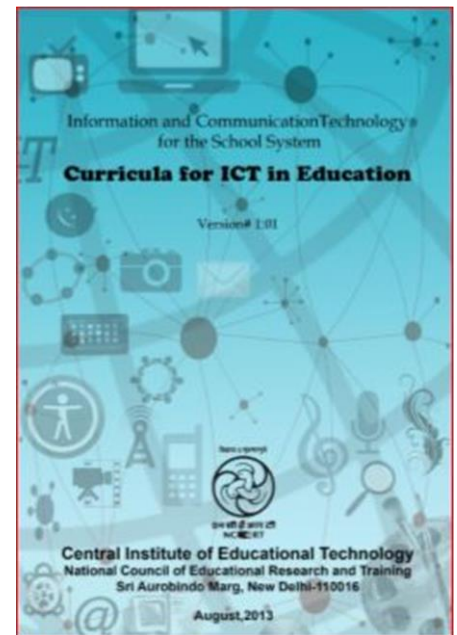


KOER was a GOK - UNICEF program implemented as part of inservice teacher training

Knowledge contribution

IT for Change has demonstrated syllabus by being a core committee member of the National ICT core curriculum committee.

Changing the discourse in technology integration in education, designing curriculum and syllabus. ICT makes language learning come alive.



3. ROLE OF TEACHERS IN TEACHING & LEARNING THROUGH TECHNOLOGY



In order to ensure execution and sustainability of any new component being introduced inside the classroom, it is very important to establish the role of teachers since they are the ones who can actually bring the change in terms of learning levels. Technology is just a tool in the form of a teaching aid which makes learning more diverse and enhances skills. Hence the motivation and capacity building of teachers must be the utmost priority. The Shiksha initiative of SNF as well as HCL Foundation organizes regular training workshops where they are introduced to the rationale behind ICT classrooms. Since these teachers are working in government schools, mostly in

rural settings they become reluctant to use newer ways. The training workshops hence are more interactive and activity based so that they relate with the content and are comfortable practicing it. Refresher trainings and peer learning methods play an important role in building an environment where they come forward with their own innovative practices which strengthens the overall academic space.

The Subject- Teacher Forum (STF) in Karnataka is an outcome of state level which has built a collaborative network for learning & sharing.

The STF was UNICEF – GOK program implemented as a pioneering model of teacher education, through a “Professional Learning Community” approach. IT for Change has presented experiences from their professional teacher learning communities at several international symposiums organized by Clix, MIT etc.

The major challenge and question for a lot of teachers is that they don't use technology because they don't know what to do with it – Sriranjini Ranganathan (IT for Change).

The motive is bridge that gap and make it available and usable at the same time so that there are no barriers to it.

The idea behind all these practices is to empower the whole education system and disseminate it all across through various forums and knowledge sharing platforms. The teachers during the panel discussion showed keen interest in understanding these different components of ICT learning. In order to create a vision in their mind it is important to create awareness at the first place. In an era of digitalization, accessibility to content and utilizing it in an optimum manner is something that will change perspective and introduce a cultural shift in content delivery mechanisms. During the course of discussion, teachers also participated in the session by raising queries regarding how can they access online and offline content.

The purpose is to integrate technology within an existing institution and ensure that it gets acceptability in a common platform in order to develop a creative insight and enhance learning levels amongst students.

Outcomes from state level work



- *STF - a self-paced, self-directed, continuous learning, peer learning based, systemic TE model*
- *Integrating ICTs for OER creation and teaching learning*
- *Collaborative networks for learning and sharing*
- *Systemic, scalable*



4. ENABLING ENVIRONMENT FOR TECHNOLOGY IN EDUCATION

Although teachers are the face of implementation of ICT enabled content, the role of administration and state authorities cannot be neglected in initializing it and taking it forward. The district magistrates of Hardoi and Sonabhadra districts, Mr. Pulkit Khare and Mr. Amit Singh were a part of the workshop and have played a pivotal role in introducing Shiksha initiatives in their respective districts. Few months back a workshop in Hardoi was organized where teachers and Gram Pradhans of Kachhauna block had gathered, and the district magistrate of Hardoi, Mr. Pulkit Khare had a vision in his mind about a reformed education system which he communicated during the workshop and it created an environment which has changed the face of several government schools in Kachhauna today.

Mr. Amit Singh, District Magistrate of Sonabhadra introduced the Shiksha initiative of ICT based audio visual content in government schools which sets an example of how important and contributory is the role of government officials in order to bring a reform.



Mr. Prabhat Kumar, IAS, Additional Chief Secretary who was also the Chief Guest for the event addressed the audience of teachers and state officials about how important it is to develop a good education system. He focused



on the role of a teacher in nurturing the student and with new technological inputs and availability of digitalized content it gives us all a space to create better learning environment.

Thus when we talk about enabling environment for technology in education, it is a flow of energy which should disperse from top to bottom and a systemic channel of inputs and outputs which gives a good shape to an institution. The teachers are the change makers of the nation at large and a conducive learning environment with ICT enabled classrooms can not only create a beginning but also motivate others to embrace these practices and change the scenario of government schools all across India.

5. EXPERIENCE SHARING & FELICITATION OF TEACHERS

After an intensive discussion on different components of ICT in Education, the teachers from several schools located in different blocks came forward with their presentations where they showcased their efforts in bringing a change. The presentation was done in the form of audio-visual clippings, pictures of the classroom and spoke about the innovative practices that they have introduced in their respective schools. Teachers from project implementation areas of Samuday also shared their experience about using ICT enabled content in their classrooms and the



difference it has created in the overall learning environment. Selected teachers were felicitated by Mr. S.V. Singh for their outstanding contribution in the field of primary education and to continue their good work in future.

The following teachers were felicitated from Samuday implementation areas of HCL Foundation along with teachers from other aspirational districts for successful implementation of best practices in the field of primary education. This workshop provided a platform for recognition and motivation of such resources in the education system who can set an example for many more.

S.NO.	Name Of Block	Name Of School	Name of Teacher
1.	Kachhauna	PS Suthehna	Bharti Devi
2.	Kachhauna	PS Sunni	Ramakanti
3.	Kachhauna	PS Musalmaanabaad	Rashami Nishad
4.	Kachhauna	PS Hathauda	Madhuri Patel
5.	Bahendra	PS Kodarakheda	Farukh raza
6.	Bahendra	PS Bahalolpur	Sudheer
7.	Bahendra	PS Karlawa	Md. Arshad
8.	Bahendra	PS Rithawe	Rajesh
9.	Kothawa	PS Jasaipur	Renu Verma
10.	Kothawa	PS Thangaav	Madhurima
11.	Kothawa	PS Korokala	Ajay Pal

ANNEXURE

WORKSHOP PROGRAMME

Agenda Workshop on A Way forward in Education through Technology			
S.NO	Agenda/ Programme	Speaker	Time
1	Welcome Address	Alok Varma, Add. Director, HCL Foundation	10:00 AM - 10:10AM
2	Context Setting and Situation Analysis	Sarvendra Vikram Bahadur Singh Director, Basic Education, GoUP	10:10 AM – 10:40 AM
4	Address by Chief Guest	Dr Prabhat Kumar (IAS), Additional Chief Secretary, Basic Education	10:40 AM – 11:00 AM
5	Enhancing learning outcomes through ICT in Education	Panel Discussion: Moderator- Dr. Sarvendra Vikram Bahadur Singh, Director Basic Education, GoUP	11:00 AM – 11:40 AM
6	Role of teachers in enhancing teaching and learning through technology	Panelists- Sriranjini Ranganathan - IT for Change, Yogesh Kumar- HCL Foundation, Robin Sarkar-Shiv Nadar Foundation, Amit Singh (IAS)- DM Sonebhadra, Pulkit Khare (IAS)- DM Hardoi, Parul Gupta -British Council	
7	Enabling environment for technology in Education		
8	Experience sharing / Open Discussion	By Principals / Teachers / Pradhans	11:40 AM – 12:40 PM
9	Felicitation of Principal/ Teachers (Mementos)	By GoUP	12:40 PM – 01:00 PM
10	Closing Remarks/Vote of Thanks	Lalita Pradeep- Additional Director, Education, GoUP.	01:00 PM- 01:15 PM
11	Lunch		01:15 PM Onwards

REGISTERED PARTICIPANTS

List for HCL Foundation Basic Education Department Workshop

S. No	Name	Organization	Contact no
1	Rubina Maiti	Unicef	9415561377
2	Sriranjini Ranganathan	IT for Change	
3	Parul Gupta	British Council	9999928949
4	Alok Varma	HCL Foundation	9999744557
5	Yogesh Kumar	HCL Foundation	7754919888
6	Santosh Dwivedi	HCL Foundation	9793333557
7	Vaibhav Chauhan	HCL Foundation	9821688879
8	Kirti Karamchandani	HCL Foundation	8009044555
9	Sudha Kumari	HCL Foundation	7023333720
10	Akshansh Akshat	HCL Foundation	7054662225
11	Deepanshu	HCL Foundation	9649981260
12	Ashish Kumar Singh	HCL Foundation	9936642894
13	Manvendra Singh	HCL Foundation	9571599273
14	Saranya Pradhan	HCL Foundation	7880592888
15	Rohit Raj	HCL Foundation	8789860887
16	Laxman Puttewad	HCL Foundation	7880941888
17	Jaya Singh	HCL Foundation	7880594888
18	Anupma Anand	HCL Foundation	7887095888
19	Nishat Firdaus	HCL Foundation	8541027632
20	Bhuwal Prajapati	HCL Foundation	8869897990
21	Mahendra	HCL Foundation	7055716030
22	Kamlesh	HCL Foundation	9453250678
23	Supriya Jha	HCL Foundation	7086459966
24	Raghwendra	HCL Foundation	7055716031
25	Robin Sarkar	Shiv Nadar Foundation	9811147275
26	Mayank Sinha	Shiv Nadar Foundation	9839556655
27	Preeti Sharma	Shiv Nadar Foundation	9810169119
28	Renu Chauhan	Shiv Nadar Foundation	8755472269
29	Deenanath Tripathi	Shiv Nadar Foundation	7055716028
30	Sharad Trivedi	Shiv Nadar Foundation	9839632339
31	Bharti Devi	Teacher- Hardoi	7755880500
32	Ramakanti	Teacher- Hardoi	8009417791
33	Rashami Nishad	Teacher- Hardoi	9598676430

34	Madhuri Patel	Teacher- Hardoi	9454129593
35	Farukh raza	Teacher- Hardoi	8393927044
36	Sudheer	Teacher- Hardoi	9236839121
37	Md. Arshad	Teacher- Hardoi	8393927044
38	Rajesh	Teacher- Hardoi	9198644292
39	Renu Verma	Teacher- Hardoi	9519063865
40	Madhurima	Teacher- Hardoi	8953136983
41	Ajay Pal	Teacher- Hardoi	9919531606
42	Satendra Singh	Head Master- Hardoi	9453672361
43	Rashami Nishad	Head Master- Hardoi	9598676430
44	Md. Saddique (Pradhan)	Pradhan- Hathoda, Hardoi	7905933171
45	Abhishek Mohan	ILFS	7080230333
46	A.S. Patnaik	ILFS	9956753841
47	Kamlesh Tiwari	Room to Read	9009536586
48	Sriranjini Ranganathan	IT for Change	9916092994
49	Saiyad Karar	Aga Kha Foundation	8741908725
50	Suyash Misra	Brighter Minds	9839624098
51	Anupam Kumar Mishra	HCL Foundation	7238873075
52	Ramprakash	HCL Foundation	7510002978
53	Binod Kumar Sinha	OXFAM	8687955444