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Swachh Bharat is just not a slogan. It is a mission with a massive and compelling Vision. It touches every Indian - in cities, towns and villages. Our Honourable Prime Minister has wisely set the target end date as 150th Birth Anniversary of Gandhiji which is Oct 2, 2019. Organizations and people are already making pro-active efforts with an extra coordination and action impetus. However, the timelines seem to be tight for the amount of work to be done.

Skilling for Swachh Bharat is a major Component. It is both a Key Success Factor and a Key Result Area. Unlike the past Skilling initiatives, Vocational Training Providers cannot treat this as just an opportunity for churning out numbers but has to contribute with performance. Swachh is the foundation for other Missions of Make in India and Smart Cities. Skilling for Swachh entails developing our own unique capabilities, social re-engineering, technology adoption, continuous process design and rapid controlled implementation.

The first step in Skilling for Swachh would be the setting-up of the Sector Skill Council for Sanitation. This will lay down the National Skills Qualification Framework (NSQF) levels, and make well-defined Qualification Packs (QPs), and National Occupational Standards (NOS).

The Council has to provide adequate time for consulting all stakeholders and getting them on board. The SSC also has to lay special focus on building inclusiveness for people traditionally engaged in sanitation activities. This will give the much-needed respectability to a profession which has been seen with disdain due to the prejudices that Indian society has developed due to its roots in caste-system.

Swachh Mission covers 4041 Municipalities and Urban Local Bodies (ULBs). Considering only the Municipal Solid Waste Management (MSWM) - assuming an average manpower of 500 per ULB, the manpower for MSWM pan India works out to a requirement 20 Lakhs people. Adding to this an estimated 26 Lakh Rag Pickers, mostly children and youth under 20 years of age, the estimated manpower engaged in MSW is nearly 50 Lakhs. If 5% of this manpower is trained every year at entry level at a budget of Rs 10000 per trainee this works out to Rs. 250 Crores per year. This is a sizeable opportunity for Skill Training Institutions or NSDC Partners.

The present capacity for formal training of professionals and technicians in ‘Sanitation’ is infinitesimally small compared to the needs. At the design, engineering and management levels, the supply is limited to about 42 graduate and post graduate courses in Environmental Engineering with an annual batch output of 20 graduates per course. While the quality of the UGs and PG strained for design and engineering competencies is good, this is not matched with the needs of supervisory level (diploma) and operating technician level (ITI) manpower. In fact this is virtually

\[1\text{ Green and Plumbing SSCs do not seem to give priority to Sanitation. Hence a new SSC required.} \]
All the above entails extra costs in a training. This would entail behavioral correction of the Safai Karamcharis into the Swachh Marketing campaign is required to bring Engineering Programme along with a control and monitoring. A Social Re-industry partnership, with adequate accelerated through incentives and IT/MES. The process has to be tracked at different stages of training especially for the entry-level course. Trainees should be selected based on Differential Aptitude Testing (DAT). DAT measures psychomotor ability and potential, along eight parameters such as mechanical ability, repetitive work, problem solving, numerical ability, logical thinking etc. The scores may be treated as entry level input values. Testing and assessment is done at defined stages of work identity and skills formation – viz., internalization of work elements, formation of team identity, work performance to norms, managing disruptions, multi-skilled role performance and final qualification. These have to be benchmarked against guild standards until such a time our own guilds are formed. Pool of Master Trainers has to be created some of whom will act as assessors of qualification tests.

Swachh Bharat Mission is crucial. Any slippage is unaffordable. It is also imperative to correct anomalies, which exist in our Skill Development System. The NSQF treats vocational education (VET) and academic education (AE) along the same vector, whereas, the two are intrinsically diverse. VET is based more on psycho-motor abilities while AE focuses more on Verbal and Quantitative abilities. In performing trades like Welder, Plumber, Machinist, Die Maker, Mason, Carpenter, artisans, etc., more often than not it has been observed that individuals with low academic qualification perform to higher standards. Majority of such talent is not brought into the System through designated Recognition of Prior Learning (RPL) although they command a higher guild rating and good market value, even better than a higher NSQF qualified candidate and prospects of overseas jobs. This requires some minor adjustments in the NSQF and Craftsmen Instructor Training Scheme. Not doing this will exclude a large number of non-existent. Less than 10 Polytechnic Colleges offer Diploma in Sanitation and DGET/NCVT is yet to develop Craftsman Training Courses in this area. Even the past needs of ULBs and Municipalities have been large and only vicariously met by few graduates from Civil Engineering and Town Planning disciplines and mostly by general graduates skilled through experience. At the Operating Technician level, few NCVT - Plumbing Certificate holders carry out technician level functions after an apprenticeship in the Public Health Engineering Department of the State Government. All these do not add up to even 10000. Most of the rest are filled by self-trained Safai Karamcharisor general staff raised through ranks.

This abnormally ‘inverted pyramid’ is symptomatic of the ‘low social value’ accorded by our society to this sector of livelihood, even though their remuneration levels in recent years is becoming higher than the average.

This imbalance is serious and has to be corrected immediately to ensure that manpower does not become a bottleneck during the starting phase of Swachh Schemes. New or additional courses in Sanitation/PHED/ Environmental Engineering have to be started in engineering and diploma colleges and IT/MES. The process has to be accelerated through incentives and industry partnership, with adequate control and monitoring. A Social Re-engineering Programme along with a Marketing campaign is required to bring the Safai Karamcharis into the Swachh Structure. This would entail behavioral immersion and personal development training.

All the above entails extra costs in a setting where waste is traditionally regarded as having ‘no value’ and with the waste (MSW) continually growing due to urbanization. The moot point is how it will be sustained in the long run. ‘Who pays for the Skill and Competency Development Training?’ Cost will further swell up due to incentives, medical benefits. Personnel Protection Equipment, Provident Funds and other measures to make working safe and respectable, especially to Safai Karamcharis. This will be partly off-set due to selective mechanization, but skilled human intervention is unavoidable, even desirable, given the variation and variety of waste materials.

Beside Swachh Cess and levy on Pollutants (industry and citizens), there must be pay back in terms of assured increased performance by trainees who have undergone Skills Training. This must be measurable and include work efficiency of both the individual and of the system, in terms of increased value generated from the waste at the stage trained, and linked to the level of actual value accrual. This necessitates adopting work-focused pedagogy as outlined below.

The Training must have on-site practical component. It should have adequate provision for hands-on practical exercises and project work, with budget for consumables. There should be adequate number of ‘Master Technicians’ who have high level multi-sensory expertise to impart right and professional working methods. The cost will be 40% to 60% higher than the Government guidance rates. If executed well, the costs will be more than compensated by higher performance and quality. The multi-sensory pedagogy thus imparted assures accelerated skill attainment proved through qualification testing.

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2 DAT used for trainee selection in Defense Services; also by NGOs for VET for Street Children.
natively trained artisans from India’s asset list.

In sanitation field, the present NSQF and RPL system may eliminate deserving Safai Karamcharis with intuitive talents and special skills. It is another matter that even if this is corrected, most of them may perform less in Attitude scale – you cannot expect a person living in waste dump to have a great attitude. This requires abattery of behavioral and social engineering interventions.

It has been a common trend especially in India to replace native manpower skilled resources for eg., handloom weavers with capital intensive automation/mechanization solutions. Care should be taken that this is avoided in Swachh. Swachh Mission cuts across the length and breadth, every aspect, person or group, place and activity of India. It covers public health, household living, municipal waste management, sanitation, water and sewerage, environment and air, industry, medical and hospitals, electronic gadgetry, transportation etc. We take “Municipal Solid Waste Management” as a case in point as there is an institutional mechanism of Municipal Corporations or Urban Local Bodies (ULBs) handling it.

**Municipal Solid Waste Management (MSWM):**

**The Ideal MSWM System:** The Value Chain of MSWM originates from the household and street waste. The ideal way starts with each household sorting and classifying waste into: (a) Organic and bio-degradable, (b) Plastic and (c) metals, paper & others that are recyclable. It is carried to Ward or Area level collection point, from where the sorted Waste is routed at least three-ways for value generation into Power, Compost Fuel or Recycled Materials. Therefore, MSWM has a ‘notional input value’.

**Our legacy system** is very different from the above ideal. “Waste” does not have a value as it has to be thrown out from our houses. There is no sorting or segregation as it is taken from outside houses and heaped at ‘locations’ from where garbage trucks carry to large dumps (called Landfill). It is mostly at the Landfills and to some extent at locality collection points that sorting is done by rag pickers, mostly out of school children belonging to Safai Karamchari Community. With increasing Urbanization, Landfills (like Deonar ME Ward in Mumbai) have become eye sores and flashpoints but yet at present provide livelihood for a large number of Safai Karamcharis as value creation takes place at the Land-fill.

Launching of Swachh Mission has triggered a large number of initiatives based on sorting and classification at household level. Assuming that this will work, drastic technological solutions like plasma incineration at landfill level are being proposed. The relationship between Waste and People are cultural and deeply routed. It might work in pilot areas and some pockets but to assume that the habit change will happen at mass level is being unrealistic. If this does not happen and the Landfills are downsized with technology solutions, it will throughout the Safai Karamchari community out of livelihood employment.

It would be wise to adopt simultaneous, two-ended transformation approach: (a) Start from household/Unit based initiatives and move forward, involving training to householder and communities (b) Start from Landfills and move backwards involving training on safe and efficient ways of rag picking and value generation at Landfills. Over a transformation period of say, five years, a balanced and sustainable new system will emerge out taking care of Swachh along with livelihood assurance for Safai Karamcharis. From the present “Clean Inside; dirt outside” to the “Clean Inside; clean Outside” to achieve is thus a Social Enterprise process.

Sectors and areas/trades for skills training are outlined below.

a) General: Behavioral Immersion Programmes for SKCs, Other Staff, NGOs, Citizens – visits to Landfills

b) Collection and Sorting: This is a new system introduction involving training to householders through mass communication and training to NGOs and Municipal workers on logistics/systems and in re-cycling. May be done with Industry partnership with environmental engineering/recycling companies. Proprietary management systems may be introduced with implementation training – opportunity for Pilots to generate IPR for Institutions like IIT/IIMs.

1. **Key Performance Indicators:**
   - Increase in recycled % of MSW;
   - % of bio-degradable and non-degradable wastes. Sub-areas: Handling of e-waste, hazardous & toxic waste; medical waste etc.
c) Logistics & Transportation: Ideal for developing transportation and route planning models for optimizing operating costs. Training of Outsourced Envro Engg Company Staff, ULB & Municipality Staff, Managers and Supervisors of Collection Stations, Land Fills, Composting Yards.

1. Key Performance Indicators: tonnage transported to collected; transportation cost reduction

d) Technical Training on Composting.

1. Key Performance Indicators: Sales value of Composts sold

e) Land Fill – Training for Manager, Supervisors, Rag picking Contractors:

• Conversion to Compost;
• Recycling; Employment of Rag pickers: PPE, OSHAS Training & Implementation
• Leachate Management: Measurement: Water Testing
• Waste to Power: Recovery and power generated and sold to grid

Sanitation – Household and Community Toilets

a) At Construction Stage:

• Training of local youth as Masons for Toilets and Septic Tank for both household and community sanitation schemes
  • Training of Plumbers and Carpenters/Joinery
  • Measurement: Cost saved vs getting skilled manpower from outside; quality of construction (vis a vis specifications)

b) At Operation Stage

• Training of youth as Sanitation operators

c) Post – Construction Employment/Skill Upgrade:

• Masons and other Construction technicians engaged in Housing Projects of the Government – like Pradhan Mantri Awas Yojana or community sanitation/school projects

• Maintenance Contracts for Buildings Maintenance

Water Management:

a) Similar skills training as above

b) RO Plant operation and distribution as a social entrepreneur: Measurement; Quality and Quantity provided to various segments: Schools, Community (SC/ST, PoW, Women, Geriatric etc)

c) Water Testing Course for contamination.

The above gives an indicative scope. Swachh Bharat is a precursor to an economic development phase in the area, leading to better dwelling units, lifestyle and health with appropriate and relevant skills training as inputs.

P. M. Amir Sultan (Amir), Skill & VET expert, is a Senior Consultant with Asian Development Bank, designing Skill Interventions for India. He is an Engineer, MBA (IIMA) and has devoted the recent ten years exclusively on Skills Development. Amir believes that Skills and VET schemes implemented without social re-engineering will not get grounded to be able to reap the benefits of demographic dividend. The focus of his work has been on industrial skills. Amir is a novice in Swachh Mission but it interests him, as ‘Housekeeping’ has been foundation on which many countries like Japan, Korea and Singapore have their stamp of development practice with social and cultural interventions. Can we do it in India without social engineering? This paper brings out the issues and challenges. He can be reached at amir[dot]performanceplus[at]gmail[dot]com
Power Sector Skill Council, India: Skilling youth for Vocational Careers

V. S. Saxena & Rajat Singh

Power Sector Skill Council is an organization dedicated to the cause of facilitating Skill Development through a range of initiatives in the areas of Power Generation, Transmission, Distribution, Renewable Energy Power Equipment Manufacturing and Downstream activities. This is an industry driven, industry-focused body committed to qualitative and quantitative improvement in industry workforce for Power Sector. With a strong quality focus on adherence to quality across all activities, this is a Civil Society Organization registered under the Society Registration Act 1860.

PSSC is creating a dynamic labour market information system (LMIS) to keep track of the labour market while identifying skill gaps in various states of India. They have framed occupational standards aligned to industry’s requirements, and are currently mapping them to international standards. This will help create a standardized supply of skilled manpower to the international labour market, helping India position itself as the “Skill Capital” of the world. PSSC through its registered training partners carry out skill training and assessment of enrolled candidates. They assess and certify the trainees and provide support for their gainful employment or self-employment leading to sustainable livelihoods for the trained youth.

On April 14, 2016 CEMCA Signed an MoU with PSSC to collaborate on TVSD

Roles & Functions of PSSC

- Development of QP / NOS
- Affiliation of Training Providers (TP)
- Affiliation of Assessment Bodies (AB)
- Demand driven allocation of Skilling Quota for Training Programme
- Development of curriculum & contents
- Facilitate training delivery using innovative usage of media
- Accredit assessor to ensure assessment
- Certification, Employment & Self-Employment
In less than one and half years of its existence, PSSC has trained more than 5000 candidates across India. It has conducted a nationwide Skill gap survey across the power sector and affiliated 44 training providers and 8 assessment bodies. PSSC has developed 50 QP/NOS covering power generation, transmission and distribution, renewable energy & equipment manufacturing sector. It has partnered with different states such as Bihar, Manipur, Odisha, West Bengal and Tripura. Partnerships of collaborations are in progress with other states including Chhattisgarh, Madhya Pradesh and Jharkhand. PSSC has also signed MoU with different Institutional Organizations such as APSSDC, ASAP, UPSDM, ESSCI.
Mr. V. S. Saxena is Senior Consultant with Power Sector Skill Council of India and has more than 4 decades of experience in Power Sector in BHEL & Power Finance Corporation. He is a graduate from IIT Madras and has a Management degree from FMS, Delhi. He can be reached at vs[S]axena[@]Hotmail[.]com

Mr. Rajat Singh is Technical Officer with Power Sector Skill Council of India and can be reached at rajatsingh[@]psscindia[.]com

MOU signed between PSSC and Kerala Addl. Acquisition Programme Govt. of India

Advocacy Workshop on Skill Development Initiatives in Bangalore

NESBUD, Pusa Institute and Chitkara University.

CEMCA has partnered with PSSC on April 13, 2016, to augment their training courses using Audio-Visual content to make the learning easier for the school drop outs who get trained on Power Distribution roles. The 3 year long partnership mainly aims at Capacity Building of Trainers, Content Creation and tracking the impact of CEMCA’s intervention in providing sustainable livelihoods for youth in Power Sector across India.

Strategy of PSSC in India is to engage State Utilities to develop comprehensive Skill Development plan and ensure remedial steps, whenever required. PSSC is working closely with industry bodies to give preference in employment for certified workforce. They plan to develop at least 10 centre of excellence across India. By 2016-17, PSSC aims to skill about twenty thousand candidates and train about 100 Trainers and Assessors.

PSSC has a dedicated team experienced in power sector having vast experience of working in various sub sectors like power generation, transmission and distribution. They are pioneers in creating standardized content in house ensuring quality training in a standardized manner. They have strong Industry connect to facilitate On-Job Training (OJT) for the trained and semi-skilled manpower.

However, their key challenges are serious shortages of qualified and skilled trainers and assessors, inadequate infrastructure with training providers, insufficient financial resources and Large Scale outsourcing of technical manpower causing an Ownership issue. For the intermediary labour contractor Skill Development is low on priority.
Regional Round Up

E-QUAL 3rd Academic Conference on Disciplinary Discourses in use of Technology on 17 -18 March, 2016 at the University of Hyderabad, India

E-QUAL organised a two day academic conference on “Disciplinary Discourses in Use of Technology” was held at the University of Hyderabad on 17 – 18. The conference was graced with an array of prominent speakers like Andrew McAllister, British Deputy High Commissioner, Asha Kanwar, CEO of Commonwealth of Open learning and P D Jose, Chairman MOOCS Initiative, IIM Bangalore.

Deputy High Commissioner in his address mentioned that the Prime Minister of the UK and India have announced year 2016 as the ‘UK-India year of Education, Research and Innovation’ and the E-QUAL project is supporting the core purpose of this special year.

The conference facilitated in improved capability and understanding of the practical application and value of technology-enhanced approaches to education in India amongst practitioners, students, institutions and government policy makers.

Conference deliberations witnessed discussions around wide variation across disciplines with regard to the adoption of technologies. The conference provided a platform to delve into pedagogical issues dealing with the diverse disciplines but even with the adaptability and applicability of technology to different disciplines across sciences, social sciences, humanities and behavioral sciences. The paper presenters debated both philosophical and pedagogic issues in application of technologies in education across class and ethnic groups, especially in a plural society like that of India.

The valedictory session was equally engaging and informative with Dr Balasubramanyam Chandramohan PhD (Shef), FRSA from University of London and Pradeep Kaul, Consultant – MHRD sharing their experience and knowledge on technology enabled learning.

The conference was well received and attended by a plethora of faculty and research scholars from institutes like IIT Kanpur, IIM Bangalore, NCERT, NIT Warangal, C-DAC, Tier 2 institutions, new recruits at the Academic Staff College, researchers and a few undergraduate students, thus enabling exchange of best practice, experience and knowledge in teaching and learning using technology enhanced approaches relevant to India’s context.
The Open University, United Kingdom, Confers an Honorary Degree on Asha Kanwar

In a special convocation held at the Barbican Center in London, the Open University conferred an honorary Doctor of the University degree on Professor Asha Kanwar. The degree was presented by Dr. Peter Horrocks, Vice Chancellor of the Open University. Reading from the citation, Professor Belinda Tynan, Pro Vice Chancellor, said that the Open University “recognise(s) her exceptional contribution to global education, social justice and human development”. Professor Kanwar, in her acceptance speech, said that she had always upheld the OU as a symbol of quality. “To receive recognition from the OU today is then something truly special” she said.

Exploratory meeting of Community Radio Stations for Programme ‘Science for Women’s Health and Nutrition and Radio Mathematics’ on 21st March 2016, New Delhi

The National Council for Science and Technology Communication, Department of Science and Technology, Government of India, invited CEMCA to organize an Exploratory meeting of Community Radio Stations for its flagship Programme ‘Science for Women’s Health and Nutrition and Radio Mathematics’ on 21st March 2016, following National CR Sammelan conducted by Ministry of Information and Broadcasting, GOI.

NCSTC decided to throw open its schemes to maximum number of functional CR stations who have not yet partnered with it. The station managers of 83 community radio stations from different cities participated. The initiative is a very good example of better utilization of government funds for a social cause. The inaugural session presided over by Dr. B. P. Singh, Head, Scientist-G, National council of Science and Technology Communication, had others such as, Ms. R. Jaya, IAS, Joint Secretary, Ministry of Information and Broadcasting, Dr. Munish Kumar, Economic Advisor, Ministry of Information and Broadcasting and Mr. R. Thyagarajan, Acting Director, CEMCA in the panel.

Dr. B. P. Singh, Head, Scientist-G, NCSTC, New Delhi emphasized on the need for communicating simple scientific facts to the last mile of the community to ensure healthy living and rational thinking amongst people. He presented simple case-study of how country jaggery prepared in an iron container helps anemic people to increase the haemoglobin count in their blood. He pledged his support for promotion of science and mathematics in marginalized, rural communities and encouraged the CR Stations to participate in large numbers. Dr. Munish Kumar, Economic Advisor, Ministry of Information and Broadcasting, in his address to the gathering talked about the importance of “Scientific Thinking” and its value and relevance in our everyday life. He further informed the gathering that “To develop
Launch of Community Radio Challenge

On March 18th 2016, on the occasion of the 6th National Community Radio Sammelan, conducted by Ministry of Information and Broadcasting for all the operating CR Stations across the country, CEMCA in collaboration with Ministry of Skill Development and Entrepreneurship launched the first ever competition exclusively for CR Stations called “Meri Prerana Mera Hunar” to showcase “The Best Skilling Story in their Community”. The event was attended by 190 CR Stations from all over India. In the session for interaction of CR Stations, CEMCA launched the Competition for all CR Stations called “Meri Prerana – Mera Hunar” a Radio Challenge for Operating CR Stations in the presence of Prof. Chandrabhanu Pattanayak who represented Ministry of Skill Development and Entrepreneurship.

This competition will serve as a tool to make CR stations aware of the role they can potentially play in connecting youth to skills and skilled youth to employment and entrepreneurship. CEMCA in collaboration with NSDC will generate about 180 skilling stories from communities around the country. The entries from the competition will serve as a tool for motivating youth for skillling themselves.

For the competition the following broad sub-themes were announced -

- How “Skilling” led to better livelihoods and better living standards for someone in their community?
- How a dying skill of the community was revived and preserved by an individual or a group of people?
- How differently abled people in their community found their identity and transformed themselves due to a skill?
- How has “Skill India” affected/inspired their community?

Training of ODL Professionals of Odisha on OER and ODL at Odisha State Open University

CEMCA organised a Capacity Building Programme for ODL Professionals of Odisha on OER and ODL to develop materials in Open Education Resources (OER) and Understanding details of Open Distance Learning (ODL) from 11-13 February 2016 in collaboration with Odisha State Open University (OSOU), Sambalpur at IGNOU Regional Centre, Bhubaneswar. Thirty One ODL Professionals from different universities of Odisha attended the training. Dr. Pankaj Khare from Indira Gandhi National Open University (IGNOU) facilitated this three days training along with Dr. Manas Ranjan Panigrahi, Programme Officer (Education), CEMCA, New Delhi.

The Inaugural session was attended by Prof. Dr. Ashok Kumar Das, Vice-Chancellor, Utkal University, Bhubaneswar as Chief Guest. Prof Das discussed how important to develop the e-contents and offer education through online in the present scenario. He appreciated the initiatives of CEMCA and OSOU for the development of OER. Dr. Srikant Mohapatra, Officer on Special duty (OSD), OSOU elaborated the requirement of OER training and how it would benefit the participants for determining the quality education in the state through ODL. Dr. Manas Ranjan Panigrahi conducted the technical sessions on Understanding of Open Educational Resources and Open License (Creative common licenses). Dr. Panigrahi discussed what ODL is and how it differs from the conventional learning system. Discussion about learning object was highlighted and how learning objects can be combined to form a new study material.

Dr. Khare in his session briefed the participants about the
searching tools apart from Google. He taught upon content, content management system, and organisation of content. He focused on creating wiki accounts, Wiki editing skills, Creating New page etc. The participants were divided into five groups based on different skills and each group was instructed to choose a topic for OER content generation. One of the members from each group presented and defended the topic that has been chosen for content generation. On the Second day participants were taught on Creating OERs in OER Common Platform. Participants created their accounts in Wiki Educator and OER Commons as well. Hands on training were given to participants on software’s like Audacity, My Movie Maker and Adobe CS3 professionals. Recording and Editing Visuals, Sound clippings, preparing Animations were part of the session. Adding to this, the participants were given task to prepare a course using OER and develop strategy for marketing it and giving the course a full shape. On the Last day of the training Dr. Pankaj Khare took sessions on Wiki Ethics, Monitoring activities, reverting edit and converting documents. Participants worked on refining collaborative projects and choosing a creative common open license to declare their content as OER.

Immediately after the welcome address by the Deputy Minister Ms. Na Heed, Republic of Maldives, Dr. Manas Ranjan Panigrahi, Program Officer, CEMCA briefed the participants about the programme and its objectives. He conducted three sessions viz. Understanding of OER, Open Licensing and Creative Common Licensing, Searching of OER and Development of OER using OER-Common Platform. Ms. Rashmi Kathuria, workshop facilitator, initiated the workshop with an ice breaking activity for motivating the participants and making them realise the need of the hour for teacher educators as change agents. All participants were connected on a G+ community and shared with resources on cloud. All participants created an account on MIT App Inventor and set up their Android devices for development and debugging. Participants were familiarised with the designer and block components through activities. They were given a copy of toolkit and by the end of day participants were able to do hands on with three activities viz. Text to Speech App: Loud Mouth, Accelerometer Sensor App and Speech Recognizer App: Speak to Me. Day 2 began with the recap session followed by demonstration of Activities viz. Canvas App: Scribble and Ball App: Ball Bounces. The participants were given a project work on “Orientation Sensor and Clock App: Move the Ball”. Throughout the day creative discussions happened on the use of various
blocks and components for designing the apps. The concepts of image sprites, creation and calling procedures, setting up of global variables, arithmetic operators, logical and control components and tiny database were covered through activities designed. Day 3: Ms. Rashmi demonstrated and hands on sessions on Activity “Camera App: Say Cheese!” and “Camcoder and Video Player App: Action Capture”. Participants were encouraged to use the tutorials from the tool kit to try making the apps on their own. By the end of day 3 they were able to finish three tutorials viz. Pet the Kitty, Crystal Ball and Swat the mosquito. Day 4: All the participants created quizzes and jigsaw puzzles. During the post lunch session participants were given information about how to package and distribute the apps. They learnt to export/import .aia and .apk files. Day 5: Participants were excited as some of them could finish making their first android mobile app and some participants wanted to spend more time. Their problems were troubles hooted and by the end of pre-lunch all groups were ready for the show case.

During Valedictory session, Mr. Ahmed Shafeeu, Education Minister of State was the Chief Guest for the occasion. A brief report was read by the one of the participants. Deputy Minister Education Ms. Na Heed shared her experiences about the programme and its need in the current scenario of changing educational trends in Republic of Maldives. Some of the participants displayed their self-created android mobile apps which may be used for enhancing learning and creating interest of students. Dr. Panigrahi and Ms. Rashmi shared their experiences of facilitating the workshop. In the valedictory address Mr. Ahmed Shafeeu appreciated the efforts of CEMCA and facilitators for achieving the desired goals. During his address he said children are digital natives and we as educators are immigrants. Our children can do multi-tasking using mobile technology. We need to know about the needs of 21st century learners and be prepared for educating them. He also said, we need to make the best use of tools and resources which are available. He appreciated the participants for their wonderful work done during the 5 days and congratulated the entire team of NIE for their efforts. Certificates were distributed by honourable minister to all participants. The day ended on a positive note of exploring, learning and sharing and continuing the journey for the betterment of emerging societies.

**MIB-CEMCA Community Radio Awareness Programme at Nagpur**

The three days Community Radio (CR) Awareness programme organised by the Ministry of Information and Broadcasting (MIB), Government of India, New Delhi in association with Commonwealth Educational Media Centre for Asia was held at Nagpur from February 1-3, 2016. Over three days, about 40 participants from across Maharashtra, Chhattisgarh and Madhya Pradesh were given a walk thru of the community radio policy guidelines and provisions, technical requirements, and understanding communities for the purpose of engaging them with the radio. Community Media and Technical Experts, and a representative of the MIB provided detailed information on all aspects of applying for a community radio licence as well as setting up a radio station. A panel of experts for four operational community radio stations from Wardha, Ahmadnagar, Baramati and Pune provided special insights into the day-to-day operations and challenges and shared their gratifying experiences of engaging with this people’s medium. A high point of the workshop was a visit to the community radio station at the Mahatma Gandhi Institute for Rural Industrialisation, MGIRI CRS, where participants got an opportunity to see a station in operation.

Dr. Ved Prakash Mishra inaugurated the workshop with an inspiring keynote address where he underscored the characteristics of community radio as a medium that is at once Accessible, Amenable and Affordable set the workshop in the direction. Dr. P. Sivaswaroop, Regional Director, IGNOU, Napur, delivered the valedictory address and also participated actively in the workshop. The workshop ended on a high note with participants giving an “Expression of Interest “to MIB for setting up a CR Stations.
Capacity Building Programme on eContent Development to Deliver Digitally at Open School Unit, Bangladesh Open University (BOU), Bangladesh

CEMCA supported and organised a training programme on capacity building of the teachers and IT staff of BOU on eContent Development from 19-23 January, 2016, at the eLearning Center, BOU, in collaboration with Open School, BOU. Started with an introduction, the participants engaged in the 5-day hands on training to develop and manage eContents to deliver digitally. A total of 31 participants actively participated in the workshop where 27 were academics and 4 were IT staffs. Gender equality principle has been maintained while choosing the participants. Among the participants, 13 were females and rests were males. Most of the participants were from the Open School and few from Business school and rests from eLearning Center of BOU.

With direct support and inspiration of the Vice Chancellor of BOU Professor Dr. M. A. Mannan, the Open School of BOU organized the workshop in technical support of the eLearning Center BOU. In the introductory session of the workshop, the Director of eLearning Center Professor Mostafa Azad Kamal formally welcomed the resource persons Dr. Manas Ranjan Panigrahi from CEMCA and Mr. Ashutosh Taunk, H T Media and introduced them to the participants in the workshop. Subsequently, the Dean of the Open School Professor Sadia Afroze Sultana explained the objectives and importance of the workshop. Joint Director (training) and Director, Planning and Development Dr. Md. Shafiqul Alam said that this is the first step in the university to introduce eLearning and offer courses online to the learners of Bangladesh. Following a brief introductory session, the business session of the workshop has been started with a presentation by Mr. Ashutosh Taunk on eLearning and emerging educational technologies. Mr. Ashutosh then continued to project the features of Moodle as a Learning Management System (LMS). In the afternoon session, the participants were engaged in browsing a demo Moodle-based online course. Then, the participants started to practice the various features of Moodle required to develop their eContents.

On the second day of the workshop, Dr. Manas Ranjan Panigrahi facilitated a daylong session on using and development of OER. After a detailed discussion on the concepts relating to OER and various open licenses, the participants were engaged in development of an OER in OER Commons. The session was ended with a strong commitment for OER development at BOU. The 3rd and 4th day of the workshop was very much engaging. The participants worked intensively along with the resource person to dig deeper into Moodle and thereby, upload their eContents into Moodle.

The workshop was concluded on 23 January, 2016 at the eLearning Center BOU on the main campus Gazipur. Vice Chancellor Professor Dr. M. A. Mannan was the chief guest in the concluding ceremony and distributed the certificates among the participants and expressed his desire in his speech that this training has definitely enhanced the capability of the faculties to develop eLearning Courses. He further said that BOU is the only distance learning university in Bangladesh which needs to enhance its technical capability to cope with the current demand for education and training. He was so impressed with the output of the workshop when he saw the eContents designed and developed by randomly chosen participants. Among others Professor Dr. Md. Abu Taher, Treasurer, BOU, spoke in the occasion. Mr. Tauhidul Islam of eLearning Center showed and demonstrates the newly installed Moodle LMS and the platform through which online courses will be offered. Deans and high officials of the university were present in the ceremony.

Development of OER and ICT Policy of Krishna Kanta Handiqui State Open University, Guwahati

CEMCA assisted Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati towards developing OER and ICT Policy of KKHSOU. To this purpose a meeting was held on 11th and 12th January 2016 at the University. The University facilitated the meeting to chalk out the mechanism for the implementation of OER and ICT Policy. Convenor of the meeting, Dr. Ankuran Dutta, Associate Professor of KKHSOU presented the overview on open licensing declaration at University and stated the purpose and agenda of the two day meeting. The Vice Chancellor of KKHSOU Prof. (Dr.) Hitesh Deka said, OERs will act as a viaduct among all educational institutions and help to share the treasure
Finalization of OER Policy of the Central University of Himachal Pradesh (CUHP), Dharamshala

CEMCA assisted the Central University of Himachal Pradesh (CUHP), Dharamshala towards developing an OER Policy of CUHP University. To this purpose a meeting was held on 1st September 2015 at the University and drafted policy statement for OER. The School of Education of Central University of Himachal Pradesh (CUHP) facilitated the 2nd meeting on 08 January 2016 in the Seminar Hall of Central University of Himachal Pradesh, TAB, Shahpur with the technical assistance of Commonwealth Educational Media Centre for Asia (CEMCA) for the finalization of Open Educational Resources (OER) Policy for Central University of Himachal Pradesh.

Convenor of the meeting and Dean of Education, Dr. Manoj Kuamr Saxena formally welcomed the Chief Guest Prof. Y.S. Verma, Policy Experts/Participants of the meeting. Subsequently Dr. Manas Ranjan Panigrahi Programme Officer CEMCA summarised the features of OER Policy of CUHP which was drafted in the previous meeting held on 01.09.2015 in CUHP, TAB, Shahpur. The Pro-Vice-Chancellor Prof. Y.S. Verma extended his best wishes for framing the OER Policy and also underlined that this is positive and decisive step in the finalization of OER Policy of CUHP. The participants/policy experts presented in the meeting represented their views and expected that for the successful implementation of this policy, the policy should be flexible, accountable and universal. Dr. Pankaj Khare Registrar, Central University of Punjab identified four distinguished features of Open Educational Resources i.e. adoption, adaptation, translation and contextualization. Dr. Pradeep Nair Dean, SoJMC&NM, CUHP expressed his consent about the accountability and reliability of OER which would be developed by the CUHP faculty. Reflecting on these views he also stressed on the flexibility and updating Open Educational Resources developed by faculties of CUHP. Dr. Khare emphatically raised the issue of a sound infrastructure (studio with multimedia equipment) should be provided by the university to the faculty for the smooth development of OER resources. Finally Prof. Verma assured that the University administration will take speedy steps for execution of the recommendations for the framing of OER Policy as discussed in the meeting. He also further said that the University will implement the policy after approval of the executive counsel of the University.

of knowledge with each other and also help the conventional education teaching by taking classroom lecture to all needy people with the help of information technology tools. “Moreover as it is using tool of visualisation and graphics which will help to understand and retain the lesson for long term. These can act as a valuable tool for providing quality education to the people living in every nook and corner of the country,” he added.

Programme Officer (Education) of CEMCA Dr. Manas Ranjan Panigrahi complimented the KKHSOU for showing interest in OERs and assured CEMCA’s full support/expertise to develop policy for the university. “It will help to increase the reach of this University to the heterogeneous masses,” said Dr. Panigrahi. Registrar of KKHSOU, Mr. R. B. Mahanta lauded the initiative of the University for having policy document for OER and ICT and he thanked to Dr. Ankuran Dutta for drafting both the policy document. He also stated that the OERs will give a new edge in disseminating knowledge.

Deans, Heads, faculty members from different schools of KKHSOU and resource person Dr. Manas Ranjan Panigrahi, Programme Officer (Education) CEMCA discussed various aspects of OER and ICT policy development. At the end of meeting the group finalised the draft policy document for the proper and efficient implementation in the university. The meeting was also attended by Dr. Aniruddha Deka, Director, CIQA; Dr. Saikia, Deputy Registrar (Exam); Dr. Arupjyoti Choudhary, Dean (Academic) and heads of different departments and faculty members and Registrar Mr. R B Mahanta. The meeting ended with rendering of vote of thanks by Dr. Ankuran Dutta, Associate Professor of KKHSOU.
Case Study

Skill India: A Ticking Time Bomb

Mr. Ashutosh Pratap Singh

Of all the problems India faces, the lack of employment for youth stands out for its grave ripple effect. It makes youth unproductive, shatters aspirations and poses high risk on critical national economic and social development goals. While employment has traditionally been seen as an outcome of higher education, this has served little purpose in a broken formal education system where the majority of the youth does not complete formal education.

In the last few years the shift in focus, from education to skills, from degrees to employability has provided a new way to look at jobs – old and new and provided impetus to rethink job creation, absorption and training, skilling, up-skilling and re-skilling. This has additionally brought in a change in the way college education is perceived and brought out the need for right skills and attitude rather than the right degree.

The heart of demographic dividend lies in vast majority who have no paper to show their educational qualification and are found in the society’s fringes. Most of them lose track of the main stream, take up the wrong path or are stuck at unproductive jobs. Skill development at the right time, with the right pedagogy, aided with proper counselling and support can empower them, put them on the right path and move their families from poverty to better lives.

Evolving Landscape of Skill India and Redefining Job Roles

The skilling landscape in India is a young vibrant ecosystem that is slowly evolving. The work of National Skill development Corporation (NSDC), the Sector skills councils (SSC) and the training providers has put skilling to the centre stage of the national discourse. The need to address the aspirations of the growing majority has increased the policy focus and even led to the creation of a new ministry. Matching the youth aspirations in a new connected economy requires fresh ideas about job creation and skilling. What was a technology marvel a few years ago is a commodity today.

Technology, smart approaches and global collaboration has rendered old jobs irrelevant and led to new jobs. For example, the shortage of doctors can be met by creating more doctors which requires a long term training, skilling and huge investments. Thus, this is a non-scalable and difficult to achieve route.

The other option is to reconstruct the doctor’s role itself. This is easier, quicker and scalable. This opens up creation of new “health worker” roles that require less intensive training and provides for economy and scale that the country needs. This may go to further unbundling – the specialists’ jobs into multiple sub specialist roles e.g. creating a cadre of low skilled health professionals only for high rise diseases like diabetes or nutrition care. Areas that are related to health but not life threatening can create both jobs and solve health issues in the country.

The challenge of skilling/up-skilling 150 million by 2022 requires both fundamental educational reform across primary, secondary and higher education and significant enhancement of supplementary skill development.
When high costs infrastructure models have failed, low cost, low touch, low skill scalable models have come in. Such examples of skill based jobs form the bulk of new jobs in all the sectors. Any work that provides decent wages, respect, dignified living to people in far flung areas works wonders to the gross happiness index.

### Skilling is more about Trainers and less about Infrastructure

There are many things skilling requires; the most important would be a paradigm shift in thinking. It is easy to focus on the infrastructure in schools and not the teachers. The same problem is not raising its head in skilling and we seem to be repeating our mistakes. Having master trainers and well trained and well equipped trainers is a critical step to ensure young people have skills at the end of their training.

### National Occupational Standards are too Complex

The second problem is the standardization through creation of Qualification Packs for a Job Role. Is the national occupational standard being adopted well or is it too complex? The training partners feel that the NOSs need simplification and the industry is not really backing these NOSs. It is important to have the standards gain credibility if we want to see the eco system move well. It has to be more user-friendly and straightforward both for trainees and the industry. Drawing direct parallels to education and skilling by NSQF levels has its own share of problems and can be misleading and base-less.

### Diminishing Value of Assessment & Certification

The third issue to deal at hand would be to create inspirational value of the certificate. Mass level skilling schemes like the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) compromise “Quality” for “Quantity”. While hurrying to churn out numbers, ensuring that the training quality and the certification maintain their quality standard and sanctity is a huge challenge with no easy answers. Additionally, the scheme is based on the misalignment of incentives. Majority of incentives and pay outs to training partners happen when students pass the exams. A natural focus of the training partner would be to figure out the easiest way to make students pass the skill assessment. The easiest way might not be actual training. With things happening at scale we risk diluting our assessment standards and the value of the skill certificate. Once the certificate is available to undeserving or unskilled candidates, the entire investment made for defining standards, skillling and assessing will be gone down the drain. Industry will stop valuing the certificate even before having understood the whole process behind certification. Once Industry stops recognizing the certificate, it will not lead to certification and will not be aspirational for the youth.

### Industry is not on board with Skill Certificate Concept

The value of skilled and schooled candidate vis-a-vis an unskilled schooled candidate needs better understanding and recognition by the industry. While the corporate welcomes the strategic shift of their training budgets to the government coffers utilising government schemes, their delight is not expressed in their HR strategy for recruitment and compensation. A little more effort from the industry to express this delight and gratitude can help other stakeholders do more for the industry and the youth.

As we move along, there will be more talk on the reaping the youth harvest. We must keep in mind that the efforts of Skill development is not for the individual candidate and his/her having a job, it is more for the society, a society with no jobs, idle youth is a recipe for riots and havoc. Not showing youth a way for their future can only hasten our own destruction. It is not just hope of the demographic dividend that should drive us but the ticking time bomb of the upcoming demography.

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An Expert’s Guide to
YOUR RIGHT FIRST JOB

Author – T. Muralidharan
Publisher – Rupa Publications

By Maj. Aruna Naidu (Retd.)

About the Author - Mr. T. Muralidharan
Founder & Chairman TMI Group
T.Muralidharan, an IIT Madras and an IIM Ahmedabad alum, is a first generation entrepreneur and made his mark in the HR outsourcing space by setting up three medium sized professional outfits - TMI Network, C&K Management Limited and TMI e2E Academy Pvt Ltd. TMI e2E Academy Pvt Ltd. started in 2010, is a National Skill Development Corporation (NSDC) partner company with a large mandate to skill and place over half a million graduates in the India and overseas and adopts an unique demand driven skill development model which is sustainable without government fee support. T. Muralidharan’s main focus currently, is in helping young people, especially from disadvantaged sections of the society succeed by giving them access to corporate jobs and in essence, connecting education to employment. He believes in giving as much weightage to the means of success as to the ends.

This book is targeted at young people getting ready to enter the world of work or youth who have just started on their career journey and their parents; as it provides a true insight into the “Job market of the Corporate World”. It tells the reader what to expect from a corporate job, how to go about seeking a job suitable to their qualification, personality and preferences. It also provides practical tips on how to apply for a job and how to survive the first ninety days of your first job.

The author breaks down the complex idea of “Right First Job” into 5 dimensions, namely,

- Right Job Role
- Right Industry
- Right Employer
- Right Level and
- Right City

Right Job Role

To identify the Right First Job, the author rightly argues that one needs to deep dive into critical self-analysis. The journey begins with Knowing Oneself. The author provides a quick snapshot of common traits of Personality Types, namely, Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC) as defined by researcher John Holland. The John Holland test has been adapted to Indian Context by the author along with a leading educational institution of India in Management studies. The author then describes four types of Work Environment, namely,

- Sales Work Environment
- Support Work Environment
- Process Work Environment and
- Developer Work Environment

The matrices provided by author listing job roles available in various Work Environments across Industries and Business functions give a clear understanding and classification of jobs available for a fresher. Based on the score of an individual on the, RIASEC dimensions Primary and Secondary work environments suitable to a personality can be identified and probable job roles suitable to an individual can be zoomed in to. The author defines 12 Job Personality Type and defines a “JP Fit Test” (Job Personality Fitment Test) which a computerized test based on all the above matrices to arrive at some suitable Job Roles based on one’s personality.

Right Industry

The author again provides a very useful matrix, giving an idea to the reader of the employment dimensions of a few popular industries based on factors like Industry growth prospects, Employment stability, Work culture, Work life balance and
Compensation. For choosing the “Right Industry” for the Right First Job, one must be aware of various dimensions of success and must willfully choose the “price” of achievement at the outset to avoid regret at the end of work-life’s journey.

**Right Employer**

This chapter elaborates on what to expect and what not to expect from your employer in the first job. The author presents a framework called GEP (Good Employer Proposition), which is a blend of multiple factors like work culture, growth potential, reward and recognition, salary, etc. With multiple choices available today, candidates have to take a decision regarding which employer they work for. Here the GEP helps in zeroing on potential employers. The GEP has four dimensions, they are,

- Compensation and Benefits
- Job Security
- Work Culture
- Exit Value

**Right Level**

Coming to the best entry level in the Right First Job, the author, advises the readers to guard against employers who may use “designations” to lure candidates because the importance and pride attached to designations in India. He advises the reader to analyze objectively if one is ready to play the role that the designation demands. He says, “When you join a company, your temperament should be that of a learner / trainee”. Again using a tabular representation, the author presents the pros and cons of accepting a Trainee role or an Executive role or a Manager role.

**Right City**

In this section the author gives some practical insight into challenges and opportunities offered by a job in your home-town vis a vis a job outside your home town. The author dwells upon details like finances, place of stay, food, daily commute to work and the ultimate impact of savings. He shares his rich experience and knowledge about working in various metropolitan cities and presents them very forth rightly. He also dwells briefly on the subject of looking for a job overseas.

**How to get the Right First Job**

Having dealt with the 5 dimensions that help one decide the Right First Job, the book then focusses on the “How to get the Right First Job”. This section deals with all the preparation that a candidate must do to get the job of his choice.

The author talks about “Campus Recruitment”, its procedure and its advantages and then tells the reader about various other sources of identifying job opportunities like Employment Exchange, Recruitment Consultants, Internet search and Newspaper advertisements. The author has rightly dedicated a chapter to describe “Job Boards” which is a virtual place where employers list the employment opportunities. These are new and smart ways of finding jobs, especially in the corporate sector. The author has listed the top 10 Job portals for fresh graduates which can act as a helpful aid while searching for jobs online. Having described details about a job boards, the author also offers some practical tips on successful job hunting.

Having identified the job opportunities, the book offers guidance on making the Resume, Covering letter and Reference letters with some good sample letters to refer to. The book gives a basic exposure to Aptitude Tests and Written and Technical Tests, their purpose, their structure and the preparation that one needs to do fare well in these tests which more and more employers use to filter candidates. Since the book focusses on Corporate Jobs, there is a chapter dedicated to Group Discussions which is a tool used by corporates to assess communication skills, communication style, leadership style etc. The author tells the reader about things that the employer is looking for in a Group Discussion and offers tips on excelling in GD.

The selection process for a job comprises of Interview process which comprises of Technical interviews and HR Interviews. The book offers simple, practical but effective tips on performing well in various modes of interviews like telephonic, video based and face-to-face interviews. The author also talks about offer letters – their purpose, what does one do on receiving the offer letter and on not receiving one.

Lastly the author dedicates a chapter on “First ninety days on the Right First Job”. This chapter explains why the first 90 days are important on the first right job and the types of “Induction” training offered by corporates. There is also a section on “Managing your boss” which is a very crucial part of surviving the first job.

The language of narration is candid and very easily comprehensible, since the target audience is a fresh graduate. In times when the youngsters are struggling with various issues and challenges offered by peer pressure, parental pressure, changing hormones, overwhelming opportunities, rising competition and their minds are cluttered with questions, doubts and confusions, this book serves as a practical guide – easy to read and quick to understand.

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**ePathshala: Learning on the Go**

*Dr. Amarendra P. Behera*

**Total visitors on epathshala – 28,47,331**

*Digital India* is a campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improving online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. The Digital India campaign was launched by Honourable Prime Minister of India Sh. Narendra Damodardas Modi on 1 July 2015. The initiative includes plans to connect rural areas with high-speed internet networks. The vision of Digital India has centered around three key areas. These include:

- The creation of digital infrastructure as a utility to every citizen
- Promote e-Governance and Delivering services on demand digitally
- Digital empowerment of citizens through Digital literacy and skill development

With a view to realise the goals of Digital India in the school education and teacher education sector and to reach out to all the people of India, the National Council of Educational Research and Training took the initiative of providing its resources on the web and mobile platforms. Through a special license, it has liberated access to all the digital contents including e-books. One can download and share the collections of e-textbooks for all classes and all areas of the curriculum (classes 1 to 12), supplementary reading material, resources for teachers, teacher educators and parents, in English, Hindi, Sanskrit and Urdu.

Supported by a web portal, http://epathshala.gov.in and mobile apps available for the Android, Apple and Windows environments, the e-contents including digital textbooks are being readily accessed across the country. The popularity and impact factor of the epathshala website and mobile app is evident from the figure given as under:

**About ePathshala**

*About ePathshala*

A platform for students, teachers, teacher educators and parents:

The objective of the project was not only to provide free and easy access to the books, but also to involve parents teachers and teacher educators in helping the children achieve desired levels of learning. Resources specifically aimed at parents are to help them understand and participate in quality improvement of their children’s education. Resources for teachers to tailor their teaching-learning to different needs of children have been categorized and deployed.

Contains a variety of educational resources for all:

The collections include digital textbooks, supplementary readers, audio and video resources for students; teacher’s guides and teaching resources for teachers; journals, policy documents and other scholarly resources for researchers and educators; resources for parents to help them appreciate and support their own children’s education. These resources are available in Hindi, Urdu, Sanskrit and English.

**Textbooks as digital books:**

The textbooks have been converted to the EPUB 3.0 format.
Supported by a specially designed EPUB reader, the text can be selected, the page zoomed, portions highlighted or bookmarked and the screen, font and colour changed to cater to the needs of all children including children with special needs. Included in the collection will be audio books and machine readable books in offline mode as well.

To enable a teacher to display the books in class and to facilitate reading on a regular computer, the books have also been made available as flip books with a variety of special features to enhance the ease of reading. These books are available through laptops and desktops as flipbooks.

The present collection spans all textbooks from classes I to XII, covering all subjects of the school curriculum. In all 364 titles in English, Hindi and Urdu mediums are included.

**Mobile Apps for the ePathshala:**

Apps for the Android, iOS as well as Windows platforms have been released to enable free and universal access to the ePathshala collections. The app interface is also available in English, Hindi and Urdu. The free apps can be downloaded from the app stores.

**Users rating of epathshala app on iOS (Apple) and Android (Google) play stores:**

Status shows about 1,52,599 Apps Downloaded

**Availability, Dissemination and Impact of ePathshala web portal and mobile app**

The web portal and the apps were released on 7th November, 2015 at the edNEXT Conference by Mrs. Smriti Zubin Irani, Hon’ble Minister of Human Resource Development, Govt. of India.

- In all 518 ebooks (etextbooks, teachers handbook, manuals and supplementary reading materials) available on epathshala. In all 747 videos and audios are available on the epathshala.
- The portal had 28,47,331 visitors
- The app has a rating of 4.4 out of 5 on the Google play store, 3.5 out of 5 on Apple Store and 4.7 out of 5 on Windows store.
- In all 01,52,599 users have downloaded the app from Google play store, 8,271 from Apple Store and 2,576 from Windows store.
- The app is also available in Hindi, Sanskrit, Urdu and English and categorises the resources to meet the requirements of students, teachers, educators and parents.

**Action taken to popularize ePathshala - Dissemination through Training/orientation programmes**

Multipronged strategies were followed to reach out to the clientele groups through workshops, extension lectures, training, orientation etc. In face to face and distance mode:

- Demonstrated epathshala Website and App to 30,000 Students, teachers, parents during INNSMEE at Kochi, Kerala 16-22 Dec. 2015.
- Oriented 100 Students, Teacher and Educators from CCS University of Meerut on 6th January, 2016.
- Oriented 60 Teachers from J&K, HP, Punjab and Haryana at RIE-Ajmer on 12th January, 2016.
- Oriented 50 Teacher Educators of Telengana on 14 Jan, 2016.
- Oriented 75 KRP of Science and Maths from Maharashtra at Nagpur on 16th January, 2016.
- Demonstrated epathshala Website and App to Students, Teachers, Educators and General Public during World Book Fair at Pragati Maidan, New Delhi from 9th to 17th January, 2016.
- Created an advertisement on epathshala to be printed on the Books and Journals : the Government of Rajasthan has printed epathshala advertisement on their textbooks and CIET has printed it on National ICT Awards booklet and NCERT Calendar for the year 2016. Also circulated the advertisement among all SCERTs.
- Oriented 75 students and faculty of Kurukshetra University, Kurukshetra, Haryana on 23 January, 2016
• Shared with Educational Planners and Administrators of Andhra Pradesh and Telangana on 29 January, 2016 at Hyderabad.

• Shared with a Five member delegation from the Republic of Korea, Seoul at NCERT, New Delhi on 02 February, 2016

• Oriented 47 Teachers and Teachers Educators from schools, SCERTs and DIETs (Delhi, Haryana, Punjab, Odisha, Chattisgarh and Uttarakhand) on 08 February, 2016

• Oriented 75 students, Faculty of RIE-Bhubneshwar, SCERT, IASEs and RMSA-Odisha from 8 – 12 February, 2016

• Shared the details of e-pathshala during a conference at Indian Institute of Management, Bangalore on 10 February, 2016

• Oriented 25 Mathematics Teacher Educators from DIETs of Jammu & Kashmir, Himachal Pradesh, Punjab on 10 February, 2016

• Oriented 1400 Principals of Schools under the ages of Vidya Bharati Akhil Bharatiya Shiksha Sansthan on 13 February, 2016

• Oriented 21 Teacher Educators of SCERTs and DIETs from Maharashtra, Madhya Pradesh, Chattisgarh and Uttar Pradesh on 13 and 15 February, 2016

• Disseminated about e-pathshala through social media (Facebook, WhatsApp, Twitter) and print media (Bangalore Mirror)

• Shared with 100 Teacher Educators of different Colleges of Teacher Education (CTEs), Faculty from PG-Departments, M.Ed. students and research scholars from University of Allahabad, Uttar Pradesh on 18-19 February, 2016

• Oriented 10 State Core Team members (Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh) on Digitisation of Textbooks and sharing those on epathshala from 18-22 March, 2016 and 28 March to 1 April, 2016.

• Oriented 125 Primary School Teachers of South Delhi Municipal Corporation on 10 May, 2016 on features and use of epathshala.

Monitoring Mechanism

A 3 member team (faculty, web designer and research fellow) created to work on feedback from users, analysis and work to make the App and Website user friendly. For example chapters in various books are being replaced based on the feedback on readability of font, diagrams, images etc. from the users.

Plans for extension and dissemination

• Initiated activities to convert all the e-resources as e-books developed by 48 State Boards / 36 SCERTs/SIEs including CBSE in phased manner and upload on epathshala.

• Produce two promotional videos and radio jingles on epathshala for telecast/broadcast on various channels and disseminate on social networking sites

• Created a WhatsApp group on epathshala and shared statistics and events related to epathshala.

ePathshala in the Press:
Publicity of ePathshala in Sirf News Network

A3 member team (faculty, web designer and research fellow) created to work on feedback from users, analysis and work to make the App and Website user friendly. For example chapters in various books are being replaced based on the feedback on readability of font, diagrams, images etc. from the users.
HRD Ministry launches E-pathshala for making learning easy

Introduction of online textbook by CBSE for Class 1 to 12 will help students who do not have access to or do not have resources to buy books or attend extra coaching, said CBE S's education experts and students.

The Central Board of Secondary Education's latest online site http://cbse.nic.in/ has released online content of CBSE and is made available to enrich students and teachers by providing learning and teaching materials.

Commenting on the initiative, local academicians Anil Koyal said, "It will be especially useful for students who don't have access to or don't have resources to buy books or attend extra coaching. This will help expand the academic horizons of the students. These books, covering various topics, should be upgraded so that the subjects are covered in totality."

Lectures in several languages

Moreover, the textbooks in 4-Pathshala are in English, Hindi and Urdu, which in turn can prove to be helpful for those residing in the rural areas. E-Pathshala, a web portal, hosts educational materials for students, teachers, parents, source and education, is also available through the repository developed app.

Sanju, a student of Class 8th of government school of Makkada, said, "I think this is the best of digitalization. I am happy that it has the options for Hindi textbooks as well.

Principal, Government Model Senior Secondary School, Sector 10, Harbir Anand said, "Although it is a noble initiative, but how will it help students of the government schools is yet to be seen. Everyone cannot afford a smartphone here, and provision of other facilities can also be a concern. On the other hand, Pannal Kaur, principal, Guru Vidyalaya/Public School, said, "There are many underprivileged students studying in our school. We have been trying to provide them free-of-cost books, for which we were spending a hefty amount. Now, they can download and take printouts in the smart class."

Schools have seen a total increase of 300% since it started. The new app will prove to be extremely helpful for preparation of competitive exams by Class 11 and 12 students.

Publicity of ePathshala in India Today, Chandigarh

Publicity of ePathshala by PTI, New Delhi

Publicity of ePathshala in Hindustan Times, Chandigarh

Publicity of ePathshala on NCERT Calendar

Publicity of ePathshala on Rajasthan SIERT, Udaipur textbooks

Publicity of ePathshala on NCERT Publications

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CEMCA, a Regional Office of the Commonwealth of Learning (COL) Vancouver, Canada, is an international agency.

CEMCA's mission is to promote the meaningful, relevant and appropriate use of ICTs to serve the educational and training needs of Commonwealth member states of Asia.

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**Forthcoming Events**

**The Commonwealth of Learning (COL) will be organising its 8th Pan-Commonwealth Forum on Open Learning (PCF8) in partnership with Open University Malaysia.**

*Venue:* The Forum, held triennially, will take place at the Kuala Lumpur Convention Centre.

*Date:* 27 to 30 November, 2016.

PCF8 provides an opportunity for the Commonwealth community to exchange knowledge and experiences, identify important trends and explore applications of open and distance learning in widening access, bridging the digital divide and advancing the social and economic development of communities and countries. It brings together prominent keynote speakers, scholars, researchers and practitioners in the area of open, online and flexible learning. Apart from the intellectual discourse, participants also get to experience Malaysia’s scenic beauty and, its culinary and cultural diversity. PCF8 is an event not to be missed.

**Theme:** Open, Online and Flexible Learning: The Key to Sustainable Development.

**Sub-Themes:**
- Quality and Equity in Learning (Quality Assurance Frameworks, Accreditation, Certification, Benchmarking, Ranking).
- Access and Inclusion (e-Learning, Massive Open Online Courses (MOOC), Public-Private Partnership, Equitable Educational Opportunities, Policies).
- Efficiency and Effectiveness (Business Models, Comparative Studies).
- Technology and Innovation (Teaching and Learning, Mobile Learning, Collaborative Work, MOOC, Open Educational Resources (OER)).

**Important Dates:**
- Abstract Submission: 15 April, 2016 - 15 June, 2016
- Notification of Abstract Acceptance: 30 June, 2016
- Full Paper Submission: 31 August, 2016
- Notification of Full Paper Acceptance: 16 September, 2016
- Early Bird Registration: 27 September, 2016

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**The 25th AMIC Conference on Rethinking Communication in a Resurgent Asia**

*Venue:* Manila, Philippines

*Date:* 15-17 September, 2016


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**30th AAOU Conference on Open Education in Asia: Changing Perspectives**

*Date:* 26 – 29 October, 2016

*Venue:* Crowne Plaza Manila Galleria, in Metro Manila, Philippines


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**Asian Education Technology Conference 2016 (AETC 2016)**

*Venue:* ERC Institute (ERCI), 30 Prinsep Street, #01-01 ERCI Campus, Singapore 188647

*Date:* 29-30 November, 2016


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