REACHA
ANNUAL REPORT
2011-12

CONTENTS

REACHA ANNUAL REPORT 2011-12

INTRODUCTION

The field of child development through holistic education, along with the conservation of every drop of rain-water all over India, as well as conservation of energy & all other natural resources, has been REACHA's primary concern right since its inception on 9th March, 1992. Over the last 2 decades, the organization has done crucial & strategic action research in all these areas, has laboriously evolved effective models for voluntary organizations', school and community interventions, and shared the same with various willing institutions, governments – central & state, and the corporate sector.

In this progression, the year 2011-12 was especially significant. On the initiative of the Central Board of Secondary Education (CBSE), we began to meaningfully collaborate with the Board in the field of teacher training and improvement of learning outcomes for children. This has opened up tremendous possibilities for REACHA to seriously evolve a teachers'- training programme, in collaboration with all its associates, within the next seven to eight months.

The use of appropriate ICT (Information & Communication Technology) as part of the teaching-learning process remains a constant challenge for all concerned with education. REACHA made considerable progress in this field through its continuing partnership with www.kogics.net, an open source online platform that promotes the development of aesthetics & analytical, mathematical and computer programming skills in school going children, right from their childhood.

REACHA continued to forge alliances and partnerships with like minded Voluntary Organisations (VOs) as part of its larger strategy to collaborate and share its hands-on know-how for child & community development, without fear or favour.

Our website – www.reacha.org was accessed from across the globe and this further strengthened our belief that the site has now evolved as an online resource centre for us to take our work beyond physical borders. This remains an ongoing process, and as new resources are developed, these will be continuously uploaded for wider dissemination.

Scientific and structured sports intervention in school can have an important impact on child development. This was taken up throughout the year in partnership with Manava Bharati India International School as well as the Delhi Development Authority (DDA) Sports Complexes.

The following were elected by consensus as the office bearers of the National Governing Board (NGB) of REACHA for the year 2011- 12 in its last AGM:

- Sri J.C.Pant (IAS Retd.) — Chairman
- Smt. Malati Sinha (IAS Retd.) — Vice-Chairman
- Sri V.P.Singh (IFS, Retd.) — Executive Director
- Capt. V.K.Pandey — Treasurer

- Dr. Pranav Pandya, Member
  Shantikunj, Haridwar (NGO)
- Dr. S.L.Seth Member
- Sri Laxmi Narain Modi Member
- Sri Aakash Khandelwal, .
  Beas Education Society, Amritsar Member
- Sri A.S.Awasthi (IAS Retd.) Member
- Sri Nikhil Pant Member-Secretary

REACHA WORK

Work on education and child development:

REACHA's **Project Khoj** and **Sports (Squash) Development Programme – SDP -** continued to work with different partners in the field of child development. Both these projects feed one another and work in tandem with its **R&D efforts**. The overall thrust is on action research, collaboration with like minded people & institutions and sharing the outcomes/resources for larger community welfare.

Child Centric Learning By Doing (CCLBD) approach to child development has been practiced and refined by REACHA over the years. Project Based Learning (PBL) forms an integral part of this methodology. PBL maps the curriculum and seamlessly connects classroom teaching learning to the real world outside the school campus. It also looks to promote collaborative subjects'- convergence so that all teachers in a given class can together evolve a meaningful project for delivery throughout the academic year, as part of the curriculum & within the school & class time-table. These can then be assessed as per Formative Assessment parameters defined by the Boards.

Since the launch of CCE – Continuous and Comprehensive Evaluation (**Ref Annexure 1**) – of children by the CBSE in 2009 under the Ministry of HRDs' new education policy, the PBL approach has gained significant meaning. CCE lays emphasis on scholastic as well co-scholastic development of children, with a thrust on learning that applies knowledge gained in the class to real world situations. PBL does that in harmony with the grade based curriculum. As a recognition of this work, CBSE invited REACHA to address over 500 Sahodaya School Principals at Chennai in December 2011 on ***Child Centered Education and Pedagogy*** as part of quality education in schools under CCE. (**Refer - Annexure 2**).

CBSE later invited REACHA to be part of its Teacher Training Handbook content development team for effective transaction of CCE in large classrooms in the NCT of Delhi. Due to implementation of RTE Act 2009, enrollments in government schools have increased manifold, adversely affecting the prescribed student-teacher ratio. The class strengths have gone up to as much as 80-90 students per section. This has negatively affected the implementation of Formative Assessment (FA) in these schools. Unfortunately, the Teacher Training Manuals developed by CBSE have not yet reached the teachers, and therefore they felt the need to further develop a simplified Handbook that could facilitate better delivery of FA tools in large classrooms as part of CCE. **Refer Annexures 3a and 3b** – REACHA's input to this handbook (currently in draft).

Information & Communication Technology (ICT) as part of child development continued to play an important part of the REACHA activities. Kalpana Research Learning Centre (KRLC) at REACHA Pragya Sansthan, Dehra Dun is taking this up in right earnest. The approach is based on a few basic ideas:

- Nothing can be taught, but anything can be learned. So a teacher needs to be a guide and a mentor
- Children learn by doing, in environments that provide constructive feedback, and encourage mindful trial-and-error
- Children learn effectively when they can relate to what they are learning
- Self directed learning, in the form of play, is very powerful
- Given the above, the right kind of software can radically improve the way in which children are educated

At KRLC, children work in an interactive software supported environment wherein these ideas come alive. They get to:

- Learn computer programming, one of the core skills of the 21st century, using a modern object-functional programming language called Scala - which is great for both educational and industrial settings
- Learn Mathematics - with the help of the following activities:
    - Reviewing the fundamental concepts in their school Math curriculum
    - Applying these concepts within an interactive virtual environment - using computer programming
    - Doing experiments within a virtual Math laboratory
    - Creating their own personal Math projects
- Create Art and Music – using computer programming

With their activities at KRLC, children also:

1. Learn systematic and computational thinking
2. Learn creative and artistic thinking
3. Learn effective methods for problem solving
4. Learn teamwork
5. Learn how to learn new things
6. Learn proficient use of computers and constructive use of the Internet

The activities at KRLC are based on The Kojo Learning Environment, a free and open source desktop application that runs on Windows, Linux, and the Mac. Kojo is an exciting new development in the area of Interactive Educational Software, and builds upon decades of research on effective learning. Kojo is based on ideas derived from Logo, Processing, and the Geometer's Sketchpad. It is used worldwide.
Kojo has been developed by Lalit Pant, the founder of KRLC. More information about Kojo is available at :http://www.kogics.net/kojo

Kalpana for Adults

Most of the ideas about how children learn also apply to adults. At KRLC, classes for adults (of all ages) incorporate these ideas, and get participants to:

- Learn how to use Computers and the Internet effectively
- Practice systematic and creative thinking
- Exercise their brains, for continued mental sharpness!

Some of the topics covered are:

1. Fundamentals of Computer Hardware and Software
2. Using the Internet for communication and knowledge acquisition
3. Using productivity software (word-processor, spreadsheet, etc)
4. Basic computer programming

Other topics are decided based on the interests of the participants.

About 15 under-privileged children are currently enrolled at KRLC, Dehradun.

An update on Kojo – (in first person by its Founder, Lalit Pant):

This is a progress report for Kojo over the past year – as seen via posts on the Kojo Blog (http://kojoenv.wordpress.com/)

Kojo around the world

September 6, 2012

Kojo is seeing good adoption around the world. Here are some of the highlights:

i. Björn Regnell is doing some great work with Kojo in Sweden. Here's a link to a recent presentation delivered by him at Lund University, Sweden. The following are some statistics from the presentation:
   ii. ~120 kids in the Summer School programming at LTH
   iii. ~30 teachers have participated in the inspiration course for teachers at LTH
   iv. ~20 kids try programming during school visits to LTH
   v. ~2000 visits and ~200 downloads of Kojo from Sweden
   vi. The concept works!!
vii. Kojo is being used at Cardinal Forest Elementary School (Virginia, USA) under the guidance of R.D. Latimer and Fred Allard.
viii. Dave Briccetti has been using Kojo at Diablo Valley College (California, USA) and Silicon Valley Code Camp.
ix. And, of course, Kojo is a core part of the activities at The Kalpana Center.

If you use Kojo to work with kids, drop me a line (pant dot lalit at gmail) …

Introducing the 3D Turtle

September 5, 2012

Kojo (the web version) now has a 3D Turtle, thanks to some great work over the summer (as part of GSOC) by Jerzy Redlarski! Jerzy has written a nice story introducing the 3D turtle. Check it out…

Note that in its current incarnation, the 3D Turtle is written entirely in Scala (with no dependence on any low-level 3D library), and has not seen much of performance optimization – so it's a tad slow (but still very usable). Expect things to improve on this front as Jerzy puts in more work in this area.

Enjoy!

Announcing Kojo for the Web, aka Kojo≈Ray

August 17, 2012

I'm pleased to announce a version of Kojo that runs on the web:

http://www.kogics.net/webkojo

Key features:

a. One click launching on the web.
b. No download/installation required.
c. Automatic, behind the scenes, upgrades.
d. And here's the big one – one click running of scripts on the web. The Kojo Code Exchange shows this in action.

Feedback welcome…

Enjoy!

Playing with L-Systems in Kojo; and a minor Kojo upgrade (200512)

May 20, 2012

Check out my post on Playing with L-Systems in Kojo.

Also, there's a minor upgrade to Kojo (Version 200512-1) out there. This release makes it easier to stop big runaway drawings (like complex L-Systems with many generations) before they blow up your heap (memory)!

As always, the new version is available from the Kojo Download Page.

Enjoy!

Recursive Drawing with Kojo

May 16, 2012

Check out my post on Recursive Drawing with Kojo.

New Kojo Release – Featuring Interactive Program Moulding (IPM)

May 3, 2012

I'm please to announce a new release of Kojo (Version 030512-1).

This release contains an exciting new feature that allows you to interactively manipulate your program to produce interesting output. The feature is really simple to use. Basically, you Ctrl+Click on any number in your program; that brings up a window which allows you to change the number. As you change the number, you get to see the corresponding (changing) program output...

Full post available at: http://kojoenv.wordpress.com/2012/05/03/kojo-version-030512-released/

New Kojo Release – Version Dec-29-2011 – Featuring Collision Detection

December 30, 2011

The month of December has seen the addition of some exciting new features to Kojo.

To begin with, we had Pictures. To use Pictures, kids make simple shapes with turtles, and then convert these shapes to Pictures. They can then combine pictures to come up with composite Pictures, which can be used as building blocks for further composition (and so on). Pictures can be combined using two different mechanisms:

i. A Picture building DSL (which is a Declarative API).
ii. Good old Functions.

Transformations like translation, rotation, scaling, and flipping are available during the picture building process.

This was followed by customizable unit lengths (centimeters, inches, and pixels) and local picture axes – to enable kids to make complex picture objects using rational number lengths and a nice visual reference frame (the local axes) within which transformations like translation, rotation, and scaling can be applied.

And now, with this release, we have the ability to make realistic animations and games using Pictures. This is supported by the following features:

i. Collision Detection.
ii. Vectors for specifying speeds and directions.
iii. Fine grained definition of animation behavior via act methods for Pictures.
iv. Gradient Paints for colorful backgrounds.
v. Commands to easily set the canvas background color.
vi. Better keystroke handling.
vii. Better support for MP3 playback.

Full post available at: http://kojoenv.wordpress.com/2011/12/30/kojo-version-291211-released/

Sports/Squash Development Programme (SDP)
SDP continued to work in close partnership with the Delhi Development Authority (DDA) and schools. Children of Manava Bharati India International School regularly visited DDA Siri Fort Sports Complex three times a week to learn and play squash.

Over the last 4 years more than 350 children have been introduced to the great game of Squash as part of SDP. Many of these children have begun taking further coaching at DDA Complexes through professional coaches.

It has also been observed that children who play a sport in an organized manner also study better. This has added value to the CCE assessment of these children as part of their co-scholastic development under CBSE.

Post London Olympics 2012 India is witnessing a surge in interest amongst parents, educators and policy makers to give 'marks/grades for sports.' This further validates REACHA's approach to use structured sports' activities as important inputs to child development. We believe that sports must be judiciously used to develop life skills in children so that they evolve into compassionate, responsible citizens of the country.

SDP has evolved as a sports development initiative incorporating a menu of sporting activities in schools, neighborhoods and sports complexes.

OTHERS (as part of Project R&D and Khoj efforts) –

- REACHA prepared a Concept Note for the NASSCOM Foundation. The main focus of this note was to guide/sensitize NF to adopt a bottom-up approach to CSR (Corporate Social Responsibility) as it engages with its member IT Companies under NASSCOM. **Ref Annexure – 4.**
- REACHA prepared a Concept Note on how to make pre-service Teacher Training more responsive to the current education scenario. **Refer Annexure – 5.**
- Chairman REACHA visited Suryansh College of Higher Education for Girls, Meerut on the invitation of Sri VP Singh, ED, REACHA to address the National Seminar on Recent Trends in Assessment on 3rd March 2012. He presented 5 copies of his memoirs to the library of the institution.
- The NDPL (a Tata Power subsidiary) Energy Club conceptualized & initiated by REACHA in partnership with NDPL in Delhi in 2004 is today a nation-wide movement as '**Club Enerji**' – a Tata Power initiative. As per their official website:
    - The Club sensitized 1.5 Million citizens and saved 2.8 Million Units in 2011-2012 through its nationwide 'energy conservation' movement.
    - The Club was bestowed the 'Environmental Leadership Award' and 'Best Corporate Social Responsibility Practice Overall Award' by Asian Leadership Awards 2011, at Dubai. The awards have been given to recognise an organisation for developing and executing successful and measurable energy conservation initiative and the impact it is making to the society at large.

- The wiki websites (more than 40 in number) developed with schools through Project Samvedna (in partnership with Tata Tele Services Ltd) in 2008-09 are still active, and children trained by REACHA are using this open source platform for constructive collaborative work.
- REACHA has been in constant engagement with children and youth as part of its volunteering programme. These are from schools & colleges like IIT, IIM etc. It is heartening to note that many school children that REACHA sensitizes continue to volunteer for it (Projects Khoj, R&D, SDP etc) as they go through college and take up jobs.
- REACHA continued to connect SDP through counseling workshops for parents - connecting scholastic & co-scholastic development of children. Parents are sensitized through workshops
- Initiated consultation and collaborative discussions with the Delhi State Science Teachers Forum (DSSTTF), as part of efforts to forge relation-ships with like minded forums and organizations engaged in child development.
- Initiated discussions with VOs engaged in the field of health, family welfare, education, child development and disability. Dialogue was initiated with:
    - Anandwan (started by Baba Amte), Warora, Nagpur
    - Sarthak Education Trust, Delhi
    - Score Foundation, Delhi
    - Saksham, Delhi
    - Amar Jyoti, Delhi
    - EnAble India, Bangalore
    - XRCVC, Mumbai
    - Vidya & Child
- In partnership with Ank, we submitted a proposal to Delhi government for training Delhi government teachers on PBL – Project Akshay Urja (Energy Conservation).

- The global reach and website hits on our website have given encouraging results over the last 4-5 years since this resource was launched at www.reacha.org. The data has been obtained from Google Analytics.

Sl No.	Year	No. of Hits	Countries
1	2011-12	4982	118
2	2010-11	4593	109
3	2009-10	2159	66
4	2008-09	3737	74
5	2007-08 (started in March 2008)	147	19

FINANCES

- There was a balance of Rs 7,827.50 in the Savings Bank Account of REACHA with Canara Bank, Diplomatic Enclave, at the close of the financial year 2011-12.
- There was a balance of Rs 4,249.89 in the Savings Bank Account of REACHA with Canara Bank, Malviya Nagar, at the close of the financial year 2011-12.
- There was a balance of Rs. 5,141.00 in the Savings Bank Account of REACHA with Canara Bank, Dehra Dun, at the close of the financial year 2011-12.
- There was a balance of Rs 2,17,842.93 in the Savings Bank Account (9090) of REACHA with Axis Bank at Malviya Nagar, at the close of the Financial Year 2011-12. This is a jointly operated account (Treasurer & Member Secretary).
- There was a balance of Rs. 19,533.23 in the Savings Bank Account (2060) of REACHA with Axis Bank at Malviya Nagar, at the close of the Financial Year 2011-12.
- There was a balance of Rs 15,214.00 in the FCRA Account of REACHA with Canara Bank, Diplomatic Enclave, at the close of the financial year 2011-12.
- The Receipt and Payment Statement, Balance Sheet and Income & Expenditure Statement for the year ending 31st March 2012 are enclosed as **Annexure – 6.**

We thank Captain V.K. Pandey, Director, Manava Bharati India Interbnational School, New Delhi for facilitating our accounts to be audited by the school Chartered Accountant RC Kapoor & Company.

Donations:

- Sri J C Pant - Rs. 50,000.00; Sri Lalit Pant - Rs. 75,000.00; Sri Nikhil Pant - Rs. 85,200.00; Durga Dutt Modi Foundation - Rs. 5,000.00; Sri Anand Vyas – USD 250.00
- Distribution of the book of memoirs authored by the Chairman - Rs. 92,968.00

Investments are as follows:

Sl.No.	Date	Amount of Investment	Due Date	Maturity Amount	Remarks
1.	04/3/11	2,54,844	19/6/14	3,44,348	FD with Canara Bank
2.	15/2/11	1,34,792	30/5/14	1,82,374	FD with Canara Bank
3.	15/2/11	1,15,271	30/5/14	1,55,755	FD with Canara Bank
4.	08/7/11	10,00,000	Quarterly interest @ 9.25% credited to savings account		FD with Axis Bank

I would like to thank the members of REACHA, office bearers of the NGB and all our well-wishers for their whole-hearted co-operation and support throughout the year.

J.C.PANT
Chairman, REACHA

Annexure 1
(Extract from CBSE draft report on CCE 2012)

CCE (Continuous and Comprehensive Evaluation) the flagship programme of CBSE has been a part and parcel all schools affiliated to CBSE in India and abroad for the last decade and has recently been strengthened. The CCE refers to a system of school based evaluation of student that covers all aspects of student's development. It is a developmental process of student which emphasizes on two fold objectives. These objectives are continuity in evaluation and assessment of broad based learning and behavioural outcomes on the others.

The term 'continuous' is meant to emphasise that evaluation of identified aspects of students 'growth and development' is a continuous process rather than an event, but into the total teaching-learning process and spread over the entire span of academic session. It means regularity of assessment, diagnosis of learning gaps, use of corrective measures and feedback of evidence to teachers and students for their self evaluation.

The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of students' growth and development. Since abilities, attitudes and aptitudes can manifest themselves in forms other that the written word, the term refers to application of a variety of tools and techniques (both testing and non-testing) and aims at assessing a learner's development in areas of learning like knowledge, understanding comprehension, application, analysis, evaluation and creativity.

The Objectives of the Scheme are:

- To help develop cognitive, psychomotor and affective skills.
- To lay emphasis on thought process and de-emphasize memorization.
- To make evaluation an integral part of teaching-learning process.
- To use evaluation for improvement of students achievement and teaching-learning strategies on the basis of regular diagnosis followed by remedial instructions.
- To use evaluation as a quality control device to maintain desired standard of performance
- To determine social utility, desirability or effectiveness of a programme and take appropriate decisions about the learner, the process of learning and the learning environment.
- To make the process of teaching and learning a learner-centered activity.

Continuous evaluation helps in bringing awareness of the achievement to the child, teachers and parents from time to time. They can look into the probable cause of the fall in achievement if any, and may take remedial measures of instruction in which more emphasis is required. Many times, because of some personal reasons, family problems or adjustment problems, the children start neglecting their studies, resulting in a sudden drop in their achievement. If the teacher, child and parents do not come to know about this sudden drop in the achievement and the neglect in studies by the child continues for a longer period then it will result in poor achievement and a permanent deficiency in learning for the child.

It is this that has led to the emergence of the concept of Schools Based Continuous and Comprehensive Evaluation.

In order to make Continuous and Comprehensive Evaluation successful, both scholastic and co-scholastic aspects need to be given due recognition. Such a holistic assessment requires maintaining an onging, changing and comprehensive profile for each learner that is honest, encouraging and discreet. While teachers daily reflect, plan and implement remedial strategies, the child's ability to retain and articulate what has been learned over a period of time also requires periodic assessment. These assessments can take many forms but all of them should be as comprehensive and discreet as possible. Weekly, fortnightly, or quarterly reviews (depending on the learning area), that do not openly compare one learner with another and are positive and constructive experiences are generally recommended to promote and enhance not just learning and retention among children but their soft skills as well.

The desirable behaviour related to the learner's knowledge, understanding, application, evaluation, analysis and creativity in subjects and the ability to apply it in an unfamiliar situation are some of the objectives in scholastic domain.
As regards assessment of co-scholastic areas, a few steps have been specified which the teachers have to follow. These are as follows:

1. Identifying qualities
2. Specifying behaviours and indicators of the concerned area or skill
3. Collection of evidence in respect of behaviour and indicators through observation and other techniques
4. Recording of the evidences
5. Analysis of the recorded evidences
6. Reporting or awarding grades

The analysis of records raised as a result of periodic observation is done to validate the attainment of the quality resulting in growth in the Co-Scholastic Areas. The grades and descriptive indicators are assigned on the basis of the degree of attainment of a particular skill or behavioural outcome.
Hence, in order to improve the teaching learning process, Assessment should be both Formative and Summative.
Formative Assessment is a tool used by the teacher to continuously monitor student progress in a non threatening, supportive environment. It involves regular descriptive feedback, a chance for the students to reflect on their performance, take advice and improve upon it. It involves students' being an essential part of assessment from designing criteria to assessing self or peers. If used effectively it can improve student performance tremendously while raising the self esteem of the child and reducing the work load of the teacher.
It is in this reference the teachers need to acknowledge the following points:

- Formative Assessment is the assessment that takes place during a course or programme of study and not an independent and an isolated activity.
- It is an integral part of the learning process.

- It is of often informal, i.e., it is carried out by teachers while teaching.
- It provides feedback to both teacher and learner about how the course is going and how learning can be improved during the course.
- It helps teacher and learner answer the following questions:
- Are the learners doing what they need to do?
- Are the teaching and learning strategies chosen by the teacher in need of modification?
- A number of tasks have been suggested for different subjects in Formative Assessment activities.

Annexure 2

विनीत जोशी (आई.ए.एस.)
अध्यक्ष
Vineet Joshi (I.A.S.)
Chairman

Office कार्यालय : 22023737
: 22467263
Fax फैक्स : 22515826
website वेबसाइट :www.cbse.nic.in

केन्द्रीय माध्यमिक शिक्षा बोर्ड
(मानव संसाधन विकास मंत्रालय भारत सरकार के अधीन एक स्वायत्त संगठन)
"शिक्षा केन्द्र", 2, समुदाय केन्द्र, प्रीत विहार, दिल्ली -110092
CENTRAL BOARD OF SECONDARY EDUCATION
(An autonomous organisation under the Union Ministry of Human Resource Development, Govt. of India)
"SHIKSHA KENDRA", 2, COMMUNITY CENTRE, PREET VIHAR, DELHI-110092

CM/AEO/SSC-Chennai/2011 December 2, 2011

Subject: **18th National Annual Conference of Sahodaya School Complexes 2011 to be held from 27th – 29th December, 2011 at Chennai.**

Dear Shri Pant,

The **Central Board of Secondary Education (CBSE),** a National Board of school education, is an autonomous organization under the Ministry of Human Resource Development, Govt. of India. It has about 12,000 schools affiliated in India and abroad that include Government and independent private schools.

The CBSE as far back as 1986 launched a movement called the `***Sahodaya'*** the basic spirit behind which is to nurture caring and sharing of academic quality initiatives. The Sahodaya Clusters promote a culture of co-operation and collaboration and seek to encourage schools to share their expertise, experiences and resources with each other for meaningful exchange of innovative practices.

There are over 250 Sahodaya School Complexes situated in different parts of the country that play a proactive role in empowerment of teachers, principals and students through collective efforts by establishing an effective network of the member schools.

In order to bring the members of the Sahodaya Movement on a common platform, the Board conducts a **National Conference of Sahodaya School Complexes** every year on a theme of current educational relevance. Besides facilitating peer interaction, the annual conference also serves as an effective mode of sharing community of practices and networking between schools and CBSE, thereby helping the Board in formulating its policies in a pragmatic manner and in effective implementation of its programmes. The deliberations on the issues arising out of the conference theme trigger meaningful plans of action for the future that are disseminated to the other members of the Sahodaya.

This year CBSE is organizing the Annual Sahodaya Conference at Chennai from **27th to 29th December 2011**. The conference is likely to be attended by about 500 principals from different parts of the country and abroad. The theme for the present conference is **'Quality Improvement in Schools'.** It is hoped that the deliberations and discussions would help the participants to share best practices in the immediate context of quality improvement of secondary education. Honorable Union Minister for Human Resource Development and Communications and Information Technology has kindly consented to inaugurate the conference and deliver the inaugural address.

May I take the privilege of inviting you to address the heads of institutions either on 28 or on 29 December, 2011.The exact schedule will be communicated to you shortly after finalizing the same. The sub themes for this year's conference are enclosed with this letter for your reference. The venue of the conference is **Aringar Anna Centanary Library Auditorium, Gandhi Mantap Road, Kottupuram, Chennai-87.**

A line of confirmation from your end will facilitate us in making arrangements for the conference.

Looking forward to your visit,

With regards,

Yours sincerely,

(VINEET JOSHI)

Encl: Theme and Sub-themes

Mr Nikil Pant,
Consultant,
nikhil@reacha.org
nikhil.pant@techmahindra.com,

The theme for this year's Conference is:
'Quality Improvement in Schools'

Sub-themes of the conference are:

1. **Secondary education in context of Reforms**
2. **From Constructivism to Connectivism**
3. **Networking through Sahodaya Complexes**
4. **Child Centered Education and Pedagogy**
5. **Assessment for Learning**
6. **Implementing the Right to Education Act-2009**
7. **Improving the Quality of Teachers**
8. **Harnessing Mass Media for Education.**
9. **Capacity Building through PPP**

Annexure 3a
(Content of the CBSE Handbook contributed by REACHA)

Subject: Physics **Class:** X **No. of Students**: 80

Nature of Task: Group Discussion **Duration of Task:** 30 min

Topic - Gravitation: $F = (GMm)/R^2$

Learning Objectives: after doing the activity, the student will be able to understand that:

1. Force of Gravitation is directly proportional to the product of the masses M and m, and inversely proportional to the square of the distance between them.
2. Mathematical concept of conversion of units is reinforced.

Procedure:

- Divide the class (assuming 80 children) into 10 groups of 8 students each
- Each group to have a Captain and a Vice Captain based on their aptitude of the subject.
- Each group should have a balance in terms of the aptitude of children who are its members. This will ensure an equitable distribution of scholastic merit in groups across the class
- Each group may be asked to assign a name to itself, preferably that of a famous scientist
- The formulae may be written on the black board and 2 MCQ questions written on it:
  a. Let M = 100kg and m = 10000g; R = 1km. The value of F (in Newtons) in terms of G is:
     i. G/1000000
     ii. G/1000
     iii. G
     iv. G/100
  b. State in which of the following situations the value of F increases. G is the Universal Gravitation constant:
     i. M increases, with m and R as constants
     ii. m increases, with M and R as constants
     iii. R decreases, with M and m as constants
     iv. R increases, with M and m as constants
- Each group Captain and Vice Captain should sit in such a way that they have equal number of children on either side. This would ensure that there is order and discipline within the group

(10 minutes)

- 2 adjacent children within each group are permitted to discuss both the questions briefly. They will both prepare one answer sheet containing answers to both the questions.
- The teacher would move around the class and observe how children are interacting within the peer group. He should carry a notepad and make observations on child attributes like sharing, leadership, conceptual & analytic understanding, peer learning etc (as part of co-scholastic inputs)

(5 minutes)

- After discussion, each of the 3 pairs of children should submit their answers to the Captain and Vice Captain, who will narrow down to the best answer.
- The Captain of a group that is ready with its correct answer shall raise its hand. This way, the teacher will pick 3 groups from the class in order of their raising of the hand.
- All answer sheets from the class (done by students in pairs) should be collected for grading. These should be checked in the same period, with each answer sheet being checked by another set of 2 children from another group. This should happen after the seminar presentation as mentioned below.

(10 minutes)

- The group that raised its hand first would be asked to come to the blackboard and present its answer to the entire class in a seminar mode. The 2nd and the 3rd group will get the first chance to ask questions.
- The teacher should then engage the entire class in a discussion on both concepts that are being taken up in this period/FA Activity.
- The teacher should keenly observe the entire class during this 35 minute FA activity. Relevant inputs must be jotted down in his/her notepad for relevant inputs to CCE.

(10 minutes)

Outcomes:

- Reinforcement of basic mathematical concepts like conversion of units.
- Analytical thinking while understanding how Force is proportional to variables like mass and distance.
- Correlation between physics and math learning. Children will perceive how a fraction can change when variables in the numerator and denominator are made to change.
- Observation/assessment of peer sharing, leadership skills, self assessment and other co-scholastic attributes that form part of CCE.

Annexure 3b
(Content of the CBSE Handbook contributed by REACHA – Inclusive Education)

Activities in an Inclusive Classroom

Different Types of Learners - Suggestions to Teachers for FA Activity Lesson Preparation for Large Classes

- A classroom has children who learn differently – there are visual, auditory and kinesthetic learners.
- The class may also have children who are differently abled/disabled – visually challenged, deaf & mute, orthopedically handicapped etc.
- In a large class, the challenge becomes even more with this diversity of learning types and disabled children.
- FA activity lesson planning must therefore be done keeping this in mind.
- Transaction of the teaching learning process in a large classroom should then be taken up in a planned way, catering to this diversity.

As an example, let us consider Quiz as the FA activity. The following aspects may be suitably incorporated in lesson planning/classroom transaction keeping in mind the above, assuming that one single concept is being taught in the class:

- Incorporate written/charts etc (visual), voice/speaking (auditory) and activity based/demonstration (kinesthetic) instructions. This should be taken up right upfront.
- Questions may be spoken aloud, written on the blackboard/by children in their copies and also recited randomly.
- Students groups may be formed in such a way that differently-able children are equally distributed amongst the groups.
- The teacher should lay special emphasis on adopting an 'inclusive approach' towards the teaching learning process. Suppose there are visually challenged children in the class/groups. The following empathetic approach may be adopted:
- Students should be called by their names
- Extra effort may be made on vocalization, activity based approach and adopting tactile methodologies

- Group members should be encouraged to make such children feel as 'part of the group' and not by-standers
- These children must be encouraged to speak up without fear, and clear their doubts/concepts like other children
- Answers may also be spoken aloud, discussed, written on the blackboard/copies and role played so that the core subject concept for the period gets disseminated equally well to different types of learners.

A holistic approach to lesson planning keeping the above example in mind will facilitate a more effective delivery of the teaching-learning process during the actual class/period.
A well thought out strategy to suitably cater to different types of learners in a large classroom can go a long way in ensuring that implementation of FA as part of CCE is done in true letter and spirit.

Annexure - 4

Concept Note – CSR: A Way forward for the Nasscom Foundation (NF)

The following note has been prepared based on:

1. information available at the NF official website
2. a tele-conversation with Ms. Rumi Mallick Mitra. This note was asked, keeping in mind ---
    a. the 2 cross cutting functional areas of NF work ---
        i. facilitating & strengthening CSR in NASSCOM companies, and
        ii. technology access programmes
    b. better outcomes from NF existing IT programmes, without starting new ones
3. My own understanding of community development issues – needs and requirements – based on over 20 years of experience in this sector, in various capacities (managing an NGO, as a school teacher & counselor, Principal Consultant to a CSR Foundation and a Squash Coach with the Delhi Development Authority). During this time, I have also been an active proponent of appropriate ICT based interventions for social change (wiki website developer, blogger etc). My focus has been to use ICT as an effective enabler/value add (rather than a substitute) to ongoing initiatives. How not to re-invent the wheel, and use resources/programmes already developed more effectively has also been an unending quest. This implies – collaborative work, sharing and effective partnerships amongst various stakeholders. In this process, I have also been engaged in conceptualizing, designing, implementing and monitoring impact of new interventions, whenever required, as per needs of a community.
4. The approach outlined here is constrained by lack of information on the actual state/impact of the ongoing work at NF. This may be taken as a disclaimer.

The NF website states 2 broad areas of intervention for NF as a facilitating body --- promoting effective CSR in the IT-BPO industry (within the NASSCOM member companies) and developing/using ICT programmes to bring about meaningful change in the society. The actual success and impact of these initiatives would require time for me to assess, and therefore I am not venturing into that area. I have assumed that both these thrust areas are well underway and yielding good results. Having said that, NF is now keen to see where it must go forth to further improve outcomes.

Globally accepted principles of community development tell us that for any development to be sustainable it must be ecological, economical, equitable and efficient. Community ownership of development programmes through peoples' participation is vital for these four parameters to be attained. For this, the beneficiary community should be suitably consulted before any intervention is designed for its betterment. Implementation, monitoring, evaluation & assessment of these programmes should also engage the locals in a meaningful way.

It must be remembered that the beneficiary is the biggest stakeholder in its own betterment, and that through ages the local people have devised their own mechanisms for survival and livelihood. Therefore, in my opinion, any CSR intervention/development programme should be in sync with local knowledge/resources/aspirations, and must therefore seek to further build upon it rather than replace it. Often government/NGO programmes, though well meaning, ignore this dynamics and are unable to yield desired outcomes. NF can play a role in filling this gap as a way forward for its member companies desirous of effective CSR. This would require visionary leadership and in-depth engagement with all stakeholders. The ensuing dynamics would also have to be handled deftly, with great sensitivity.

It is possible that when the beneficiaries are consulted, and are made aware of current and potent ICT toolkits, they will be keen to partner CSR in developing new initiatives as well. It is here that new age human innovation within ICT (this includes current NF IT programmes) has a catalyzing role to play - by bridging the digital divide – and multiplying outcomes through suitable embedding in sustainable development processes.

This dialogue must, however, be handled with much care so that CSR does not take, or appear to take, a higher pedestal vis-à-vis the NGO & the community.

Based on above, I feel NF can play an important facilitative role as a way forward, which I briefly state below. This approach is in sync with the 2 pronged NF mandate already underway (as earlier stated in italics in this document). I feel this role can now take a more structured, well thought-through approach.

1. NF could act as the bridge between NASSCOM member company CSR on the one hand and the Community to be benefitted on the other. Here, it could facilitate meaningful consultation between these two through the delivery partners – NGOs and government systems. This can be taken up as follows:
    a. NF could provide consultancy/support services to willing member CSR initiatives in order to orient it to a community centric approach. More often than not this is a

challenge as corporates often look at social change as a top down business process.

b. NF could also meaningfully dialogue with NGOs and government systems to make them more sensitive to community aspirations, and then look at conceptualizing/designing development interventions accordingly. Existing programmes could be re-oriented to make them people-centric.
c. These programmes could be connected to the sensitized CSR for support.
d. Upfront, NF must identify honest & conscientious community leaders who can voice local concerns and aspirations with full integrity. These leaders should be part of the dialogue at every forum of interaction.

2. Delivery of these CSR initiatives/programmes could then be through:
    a. Direct intervention – wherein company associates are able to directly work for the community, through in-house CSR with qualified staff (MSW etc). These associates could be part of the HR/payroll of the company.
    b. Outsourcing – with partnerships with NGOs (more focused locally) and the government system (for large scale impact)
    c. Partnerships with both NGOs (as a resource/training partner to CSR) and government systems for scaling up successful pilot initiatives.
3. NF has a menu of ongoing IT interventions – innovation awards, software & hardware donations, IT trainings, volunteering initiative, skilling, accessibility initiative, research etc. **These programmes, when offered to various stakeholders as part of the approach outlined in this document, are likely to yield better outcomes**. Some of the interventions may require tweaking/mid course changes post the consultative dialogue that takes place. NF should be open to incorporate these changes in the larger interest of the beneficiaries and the member CSR that it seeks to engage and inform.
4. Some new IT interventions could also be explored like ones for more effective M&E (Monitoring & Evaluation) of NGO/government programmes. These could be funded by CSR of member companies

Even as NF seeks to adopt any new approach, it should do so only after due debate and discussion within its own team. In-house buy-in is a must before one ventures out.

Annexure 5

Pre Service Teacher training programme

A Concept Note

The intervention would focus on pre-service learners currently undergoing training at the B.Ed College, Meerut.

Key components:

This programme would incorporate the following approaches/activities in close collaboration with B.Ed College managements, teaching faculty, learners as well as partnering schools in the neighbourhood:

1. Connecting classroom teaching learning to the real world through hands-on projects, thereby incorporating an ongoing practical component to the training
2. Project Based Learning (PBL) – wherein groups of learners would be brought in close interaction with nearby identified school children. These interactions with children would be mapped to the B.Ed curriculum as also to the curriculum of the participating schools
3. PBL would take up subject-integrated/convergent projects on issues that concern the local communities from where these children come to the schools. This will help train the B.Ed college learners to develop their own PBL programmes when they are in service.
4. Continuous and Comprehensive Evaluation (CCE) of children on both scholastic and co-scholastic fronts --- as an approach to integrated child development. Learners would be guided how to better understand CCE, its implications for child development and how CCE can be used as an effective tool to nurture and develop every child in a class. They will also be trained on how to integrate PBL as part of CCE within the larger ambit of the RTE Act.
5. Assessment approaches – formative as well as summative. How these need to be designed/structured so that learning occurs with understanding and comprehension
6. Innovative teaching-learning methods in the class rooms. How to devise, develop and implement them, keeping the child in mind
7. Approaches to inclusive education – wherein able bodied and physically disabled children can learn together in harmony with each other
8. Understanding the hidden potential in every child – and nurturing it for a noble cause – as part of the teaching-learning process. How to integrate this in lesson preparation, design and delivery
9. How to make math enjoyable for school children – approaches and methodology
10. Developing scientific temper in children – how to get children excited about science
11. Improving English learning and speaking skills – to be integrated into the overall training module

Mode of implementation:

- Design, delivery, monitoring & evaluation of an integrated teacher training module that fits into the ongoing time table of the college
- The module will suitably incorporate the 11 bullets stated above under Key Components
- 1-2 visits per month to the college by the Consultant to directly interact with the learners, management, staff and the schools
- Close M&E (Monitoring & Evaluation) of the programme during college visits as also off-site

Outcome:

The B.Ed trainees would evolve as Lifelong Learners through this intervention.
Key outcomes would be:

- Understanding how important a teacher is to integrated child development
- Realizing the import of applied teaching – connecting the classroom to the real world – through hands-on learning-by-doing activities/PBL
- Sensing their role as critical agents for positive social change
- Active sensitization on RTE Act, CCE and other aspects of the new Education Policy of GoI

Annexure 6

REACHA Accounts