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Portfolio (2017-2018)

"It is not our abilities that show who we truly are;

It is our choices"

I am glad I chose this path of learning

And followed my heart's yearning

A new journey has just begun,

Empty pages, yet to be written!

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My Journey

My journey in the course began with reading 'Tottochan'. Little did I know that the book was only a sneak peak into what was about to come. Moving into the world of education had always been there on my mind. When the "I am a teacher" program came my way, I didn't think twice about joining the program. I had taken the first risk by quitting my corporate job and joining the program as an intern.

To Risk:

To laugh is to risk appearing the fool,
To weep is to risk appearing sentimental,
To reach out for another is to risk involvement,
To expose feelings is to risk exposing your true self,
To place your ideas, your dreams before the crowd is to risk their loss.
To love is to risk not being loved in return,
To live is to risk dying,
To hope is to risk despair,
To try is to risk failure,
But risks must be taken, because the greatest hazard in life is to risk nothing.
The person who risks nothing, does nothing, has nothing, is nothing,
He may avoid suffering and sorrow, but he simply cannot learn, feel, change, grow, love....live.

Chained by his certitude's, he is a slave;
He has forfeited freedom,
Only a person who risks is free.

- Anonymous

I gradually realized that taking the first risk was not enough. I had to learn to risk all of the above elements of the poem – I learnt to shed my inhibitions about being child-like, about emoting, dancing and singing, about being open about my feelings to my batchmates and to my class and reaching out to others for help. I learnt to stand in the classroom with love and compassion and to understand the child's perspectives. The movie "Children full of life" where Mr Kanamori tells the children of their purpose "how to live a happy life, how to care for people" is something that will always inspire me. What touched me the most was how children bonded over their joys and sorrows. Building a positive classroom environment that fosters openness, warmth, respect, active participation and creating a culture of learning is something that required me to be open, vulnerable and be a learner myself.

Understanding the stages of child development, their cognitive style, language and socio-emotional self has helped me understand the children in my class and at home. Since I was with twelve-year olds in grade 7; I learnt to give them space, understand their argumentativeness and value of peer recognition in their eyes. It helped me understand the power of observing a child in different environments. I not only got great insights about the child I was observing but I also connected with the child because of the same.

When I took my first class, I couldn't resist teaching the children by telling them my perspective on the topic. I wondered why we spoke about reciprocal class rooms and letting children build their knowledge. Now after a substantial time in the course I not only believe in children building their own knowledge, but I am also building lesson plans that has collaborative learning built into them. When children think, reflect, solve and share their idea with each other they get a sense of belongingness. They learn very well when they feel accepted amongst their fellow students and teachers. I learnt that the teacher's role

as a facilitator, a collaborator to develop children's critical thinking, a problem-solving and their meta-cognitive abilities are so much more important than just imparting knowledge.

Learning different pedagogies and experiencing the same through classrooms has been an interesting journey too. Each of the subjects Math, Language, Social Science and Science was taught as a different pedagogy – it was insightful to learn how they are all linked together and how they are different. Language classes taught us the skills and the mechanisms that can help reading comprehension and writing skills in the other subjects. Maths classes emphasized the creation of word problems that are culturally relevant. All the pedagogies emphasized making the learning experiences worthwhile and more memorable through experiments and activities like debate, discussions, games etc. It is critical for students to learn how to apply the knowledge rather than being procedural or ritualistic about the knowledge. We all know that learning for a child happens everywhere in formal and informal settings and it needs to deal with learner as a whole human being taking into account the cognitive, physical, emotional and cultural aspects. An educator (a parent or a teacher) must be cognizant of this fact and extremely conscious of not losing teaching moments.

I have always been an analytical and logical person. Over a period, I questioned different philosophies in education, understood various aspects and developed my own thinking on education. Having learnt the about different pedagogies, integration of different subjects and different perspectives in learning and teaching, I managed to plan and prepare my lessons and assessments that were appreciated by the teachers and the project leads. However, the biggest change that I saw in me was to bring out an empathetic, understanding and emotional side in me that I was not comfortable exposing outside the immediate family. Having prepared plans, but letting go of the plans to address what was needed in the classroom; not judging people and teaching the students not to judge people and creating a safe classroom environment that brings out cohesiveness and co-operation has been my biggest take-away from the course.

The last one year has been a roller coaster ride. Letting go of my ego and my previous experience, accepting myself as a learner, the little failures and success that came my way by practising teaching has been very full-filling. I would say that my new journey as a learner in the field of education has just begun and hope to continue to learn and contribute in this field.

My Education Philosophy and Teaching Approach

When I think of the purpose of education for a child, it is to make the child understand the world, deal with the world and leave it a better place.

Education is continuous learning all through-out one's life, where we constantly sharpen our thinking by acquiring knowledge, upgrading our skills, developing our sense of aesthetics and honing our decision-making abilities. Learning in a school needs to be well integrated with the learning through one's life experience. Hence parents, teachers and the child need to come together and work towards the goals set for the child. These goals should be based on the child's interest and should challenge the child to reach one's potential.

The child needs to be aware of one's thoughts and feelings, reflecting on one's actions and having the passion to pursue one's goals with empathy. A child needs to sense, understand and effectively apply emotions to different situations. We learn from reflecting from what we have done. Hence **reflection needs to be an integral part of school education**. This will enable the child to develop capacity to choose and adopt what is beautiful and harmonious, simple, healthy and pure. Reflections will also enable the child to conquer reactions and impulses by identifying their causes through reasoning and feelings.

A teacher needs to stand in the class with love, empathy and belief in each child in the class. This enables teacher to treat all the children with equity. **Creating a safe environment for children to share and learn from each other is key to learning**. Teachers primary roles is to create a safe classroom environment of respect and warmth and establish culture of learning. It is a continuous learning process for the teacher and the children.

The course has given me the opportunity to explore the various aspects of teaching - lesson planning, execution of lesson plans, assessments and providing feedback to children.

Education should permit diversity amongst children rather than homogenising them. Hence **lesson plans** need to cater to multiple intelligences of students. There should be number of activities and learning mediums in a lesson plan so that it caters to the distinct types of learners. It should also incorporate skills that enables students to communicate their learning through diverse ways.

Experiencing the teaching in the Heritage school, I realised that best learning happens when the child constructs his or her own knowledge. A teacher needs to facilitate learning by understanding the child's current level and providing support for the movement to the next cognitive level. Hence the **execution of the lessons should be such that the students are constructing their own knowledge through the different mediums planned by the teacher**. It is critical for the teachers to catch the misconceptions and not loose on the teaching moments to clarify those. Education needs to consider teachers and students as whole human beings and enable continuous learning for both

The assessments need to be done on continuous basis through exit tickets, formative and summative assessments. **The assessments should not be done with an aim to test knowledge which is easy to do but it should test creativity and critical thinking**. It is critical that we assess children's **work ethics** so that they can continuously improve in that area.

Feedback to students should be such that it should provide specific information and needs to be educative in nature. It needs to focus in the child's progress with respect to his or her current level. In Heritage, I have seen peers providing constructive feedback to others.

To summarize, education is about developing integrated outlook towards life, being aware of one's thoughts and feelings and enabling the students to deal with life as whole.

Me as an observer

We started our practice days at Heritage by observing the teachers and the student interactions in our class. I started creating running records of my observations. Annotating and analysis of these records helped me to not only understand my students, their behaviour, their interests and cognitive abilities but also help me evolve as teacher by observing my collaborating teacher.

Observing my collaborating teacher, teacher educators and some other subject teacher has taught me skills that would have taken me years to develop on my own. These skills help me to manage classrooms, be crisp, precise, well planned yet spontaneous, ignite the curiosity amongst students and elicit questions from them and finally help students build their own understanding.

The observation of students helped me to know the students name very quickly. Addressing the students with their name was the first step to create a relationship with them. I now understand the class and the various group dynamics. This helps me plan appropriate groups that can collaboratively work together. Such groups help children build empathy towards each other and learn from each other.

Knowing my students has helped me to understand the specific age group, their interests and plan lessons accordingly. I understood that grade 7 children were most engaged when they were involved in a set of activities that were crisply planned. While some of them had started to understand abstract concepts, most of them needed concrete examples to understand the concepts. Reading of texts supplemented by board work, drawings, experiments, videos were the best ways to teach this group. Starting with simple questions and then building a chain of questions and then asking them to research those questions works very well for their grasping the concepts. Observation of their notebooks and their reading patterns has helped me understand the key learning aids that they might need during lessons. I am now able to equip them appropriate techniques like glossary, graphic organizers, Jigsaw etc.

Focusing on a child has helped me connect with the child. Knowing his interests, learning patterns, triggers that results in emotional bursts were great enabler for me to manage the him and keep him engaged in the class. I also found out that though he comes across as disruptive in the class, he could grasp most of the concepts. It is extremely important for the observations to be factual and not clouded by opinions.

Finally, not limiting these observations to my classroom and observing children in the parks, interviewing them and observing by own children has helped me validate and experience the different theories of child development. While pre-schoolers were seen to be engaged in parallel play, the 5-year olds understood the stories and messages at face value. The 8-9-year olds play in diverse groups of boys and girls. They were seen to resolve their own conflicts. Peer recognition was observed to be key to adolescents and their ability to reason resulted in conflicts with parents.

Observation is a powerful tool to not only understand students and help us evolve as teachers, it also provides relevant data and instances to parents and teachers so that they can collaboratively work on the child based on a mutual understanding.

Observations of student in my class

Purpose/ Rationale of choice:

Bharat is a student who always manages to take tremendous effort and attention from every teacher. He is actively into sports and loves to play soccer and cricket. He is very energetic and playful in the class. However, he struggles to pay attention in the class. This results in him disturbing the rest of the class very often. He loves to participate in class discussions when the topic is known to him and it interests him.

He gets along very well with his friends who also seem to have similar temperament, but he often loses his temper with them too. He uses Hindi while conversing with them and seems to be a fun-loving person.

His work is incomplete and home works are often not done. He doesn't like being observed and tends to hide his notes and homework. He seems to be reading many books, but I am not sure of his comprehension ability. However, sometimes his work is comprehensive indicating that he can improve. I want to observe him for longer time and

- find the reasons when he likes to pay attention so that he can be more consistent in his work
- identify if and how his work ethics can be improved

Bharat's Profile

Bharat is very energetic person who has many friends in the class. He likes to dress in t-shirt and shorts. He is average height and built like most of his classmates. He is an outdoor person and is normally shy while speaking in formal environment. But on topics that he is familiar with, he loves to participate and discuss. He uses Hindi much more than English with his group of friends.

Bharat is a friendly student. Most of his peers like him. He has been seen going out of the way to help other teams during culmination when they needed help.

Despite his friendly nature, he is very quick to get angry and loses his cool with his friends very often. When angry, he cannot control himself and is normally very furious. One such instance of this behaviour was observed during the expedition culmination. He was the key member of his group. He planned and executed an interesting project on wellness in adults through exercise. He understood the concepts and was quick to create the product. However, in one instance a team member felt that he wasn't helping and expressed the same to him. This made him lose his temper. At that time, he did not care about his grades (collaboration as one of the key a parameter of assessment) or feelings of the other person. He refused to work on the project for a considerable time even though the other person was quick to apologize to him.

Bharat takes time to cool down. But once he cools down, he is back to his normal friendly self. There have been times when he has been asked to reflect on his behaviour. Self-reflection and speaking to him separately helps him to understand and accept his mistakes. He has been observed to use polite language with peers in formal environment when he is calm.

In the class, he is often disruptive and needs constant reminder and reiteration of culture targets / work ethics.

Initially it was very difficult to observe him because he used to hide his work. He wasn't very responsive to me. Gradually, I understood that he tends to hide his work when his work is incomplete or when home work is not done. On one occasion, I stayed back with him to help him out with his work. This helped in creating a better understanding between us. I realized that he has limited concentration span. He understands the concepts but is not responsible enough to write or display his learning. On one

hand while work ethics is a key area where he could improve, he could also work on his communication skills. His sentences are too long and sometimes tend to be incoherent. He probably needs to work on re-reading what he has written and re-write the sentence as smaller sentences.

He learns the best when he is given attention. From the limited time that I have spent one to one with him I believe he works better when an adult is around him to make him complete his work. He needs persistent supervision. The supervision can gradually be weaned off once his work ethics improve. He is also a better learner when he is given a text to read rather than when he is watching a video. This was also evident from the fact that he grasped the concept of anaerobic respiration (that was given as text) much easier than other concepts that were shown as video. This could be because of his limited concentration span.

Bharat loves to play soccer. He plays as defender in the soccer team. He is also an active cricket player. He had once shared with the entire class on being thankful to his cricket coach who identified his talent of playing cricket. He takes a lot of pride in his sports skills. He has sustained both the sports in-spite of him being asthmatic.

He attends the appreciation of music class in performing arts sessions. He is calm and quiet during the music sessions. May be music can be explored as one of the options to improve his concentration.

Though the observations need further validations over the next semester, it has been a pleasure observing Bharat. Observation has been a powerful tool for me to not only understand the child and clarify my misconceptions, but it has also helped me form a bond with him.

Visit to SDMC School

Four days at SDMC school and the visit to Motilal camp is an experience that will be difficult to describe in words.

The community

Motilal slum is located close to IIT Delhi in Hauz Khas. The slum houses around 5000 people who have migrated largely from UP, Bihar and MP. They have been residents for the last 18-20 years and are probably the second or third generation living in the slum. Majority of the population seemed to be Hindu, but we did find a few Muslim families living there. Conversations with people revealed that the slum had significant tenant population as opposed to owners living there!

As we entered the slum we saw paved gullies lined with 2-3 storey brick houses on either side, a community hall and many temples (one of them had a huge courtyard for community gatherings). The houses had washing machine, TV, mobile phones, cycles and motor cycles for transport and were well kept.

We moved further into the slum and found gullies with open drains, flies everywhere and one full road just outside the slum being used as garbage dump. Very few houses had personal toilets. Most tenants used community toilets. The slum is said to be cleaner than other slums! A discussion with a 14-year old revealed that the cleanliness is a recent (around 6 months) development because of efforts by IIT Delhi students and other NGOs (MRYDO). The slums seemed to have a water shortage and because it is hilly we saw children carrying buckets of water from taps that were lower to their houses.

Most of the children go to Government schools (Sec 2,3,4 of RK Puram). A few of them go to the SDMC police colony Kendriya Vidyalaya, which is supposed to be one of the more renowned schools.

Quite a few men work in IIT Delhi as gardener, canteen, drivers etc. A few were ex-government employees now forced to live in the slums.

Sociocultural aspects

Women in the camp

We went to the camp in the morning. It was abuzz with children playing in the gullies – some had holiday because of Chhat puja and some chose to skip school. Women were busy with house hold chores. These women were either at home because of young children or were not allowed by husbands to work outside. Some grand moms in their 40s expressed that they would like to work, but they needed "dignified work" and illiteracy kept them from office work or work in malls. They were learning to sew at a community centre, but the NGO that used to conduct the classes had moved out. There was keenness amongst the women to work and contribute to the household income.

Caste and religion

They live in harmony although they strongly hold on to their beliefs. When I was calling certain women inside the place where we held meetings with the community, I was quietly told by the ladies inside that the other ladies belonged to a lower caste. On seeing them whisper things to me the other women quietly moved away. At another site when I asked some Harijans if they felt caste discrimination - they denied it. They found the situation much better in the slums as opposed to the villages they came from.

Education

Most of them believe in education for both girls and boys because of their personal experiences of being illiterate. They find being illiterate a limiting factor to get new jobs or to enhance existing business. They were very keen on educating girls so that it became easier to find a suitable groom. The girls too were aware that they need to be self-reliant in case their marriages failed.

Some high achievers who were working in hotel management, nursing training or computer related jobs were the role models for younger children. One lady told me with great pride that both her daughter and her husband work in the same company in Noida. While the father is a gardener, the daughter works on computer!

All of them wanted an English based education. They knew that education and English will make their life better, but the absence of role models and appropriate direction was deeply felt. Drop-out rates are higher for teenage girls because of security reasons or the requirement to look after younger children at home. Some children had not been enrolled because of the lack of a valid identity. Girls get enrolled much later. Adult education and vocational training were available earlier but had been withdrawn for unknown reasons.

Do they want to move back to hometown?

The kids felt that villages were lonelier, and women found the city better because of freedom from rituals, caste discrimination and conservative attitudes. Being in the city provided them with more opportunities to work and educate their children. Besides, machines had replaced manual labour in villages and hence they visited villages only during vacations.

Drugs

Drinking and brawls in the night by men were common. Drugs amongst younger children led to theft and increased the risk of exploitation of children.

My Experience

The visits to the camp and interacting with them highlighted various aspects about the community. I came back knowing a little more and validating what I already knew about the slums – little children playing with stones, running around gullies, women doing daily chores, drinking habits of men, the open drains, people struggling for day to day existence, caste and religious undercurrents.

Bal-Mela

It was wonderful how the entire batch came together to prepare for the mela. They chose their own area to contribute and worked efficiently on the same.

What made this experience different was the day of bal-mela. It is when - we could be one amongst the kids and the community, when the kids came and said "Hello didi, see I came to visit your school" and when we had loads of fun together – that is what made my day! Our stall was a hit amongst the children. We had regular 5-year-old patrons who came to play again and again and have biscuits. There were older ones who came for the challenges the game posed. They wanted the challenges to be more difficult and kept on making the level harder without looking for any rewards in the end.

What do I take back from the experience?

Most of the people believed that "education is empowerment" and wanted education to empower their children with knowledge, skills and self-confidence. This puts a lot of onus on education. Hence education should not only have vocational training and skills to make them self-reliant, it should also

enable them to deal with multiple situations in their life by building their self-esteem and helping them define and act upon their ambitions.

The experience of bal-mela made me realize that only when we can empathise, be one amongst the children and be sensitive towards each other that we are able to communicate what we intend to do. It was over-whelming to see the kids yearn for a piece of biscuit or a colourful glossy pamphlet. I wonder how we let our children waste food and paper!

My Approach to subjects

Mathematics

"Mathematics isn't a palm tree, with a single long straight trunk covered with scratchy formulas. It's a banyan tree, with many interconnected trunks and branches—a banyan tree that has grown to the size of a forest, inviting us to climb and explore"

- William Thurston

My biggest take away from the pedagogy of mathematics is the role of context. Since the time when we learnt mathematics in school, there has been a shift from context being taught at the end of the learning sequence more as an add on to it having more significant role. Jodo Gyan adopts RME approach that says it is important to start with a context that can be mathematized.

Hence, mathematics is about making connections among mathematical topics and domains and making connections between mathematics and real-world problem solving. We need to start with horizontal mathematization, in which the students organize and solve a problem, set in a real-life situation. Then they can move to vertical mathematization - the process of reorganization within the mathematical system itself which means moving within the world of symbols.

This results in students remembering the concepts and not forgetting the same. A context is set for life and student can always refer to the same. Hence anchoring a context becomes regenerative context.

A context also helps in visualisation of problems and hence makes it easier to understand the concepts. The students can then arrive at the next level if they can reflect on the activities conducted. This reflection can be elicited by interaction. The students are then able to apply the concepts to other situations based on this one context that has been firmly established.

Whether it is the play that sets the context for early years for one to one correspondence, classification and seriation; or the activities designed by teachers to teach them fractions or integers it is important for the teacher to

- recognize children's demonstrated understanding of mathematical concepts,
- guide their progress from context to representational understanding of mathematical concepts,
- assess systematically children's understanding of mathematical concepts.

I have taken a few classes in simple equations and comparing quantities in grade 7. Though they do not follow Jodo Gyan in grade 7, the principles of setting a context, interaction with students and making learning of mathematics a social activity are strategies that are very evident throughout. Students are encouraged to share their strategies of solving a problem. By listening to what others find out and discussing these findings, the students can get ideas for improving their strategies. It is

Moreover, the interaction can evoke reflection, which enables the students to reach a higher level of understanding.

Language

"A different language is a different vision of life." – Federico Fellini

Teaching of English in India becomes important to meet aspirational needs of people and because of the global presence of the language.

Improving linguistic skills in one language improves it in others, while reading failure in one's own languages adversely affects second language reading. English is a second language for most of the students. It needs to be taught through input rich communication environment. We need to provide children with enough exposure through meaning focused situations. If we teach language as a set of rules in early years and focus too much on the form, then it becomes a 'burden' because its incomprehensible.   At this stage, it is important that fluency is given importance and a more tolerant approach towards mistakes is adopted. Errors should be treated as signs of development. Form comes automatically by giving the students a variety of experience. Hence correcting the form in early years is not recommended.

In early years, spoken or spoken-and written input in meaningful situations through role plays, rhymes, print-rich environment and small group discussions needs to be put in place. This will ensure that the child builds up a working knowledge of the language in the first 2 years of English. Various reading strategies like - top-down (to make prediction based on overall picture, inference based on gist) , bottom-up approach (use smallest unit of language to arrive at the meaning - phonics), chunking, discourse markers are required to develop reading skills at elementary level**.**

While fluency should be the focus in primary level, accuracy becomes equally important in the secondary level. At secondary level, focus shifts to vocabulary development, reading with comprehension and literature. Vocabulary development happens through associations with other words and context better than the dictionary approach of defining the word. We need to use narrative texts with prose, fiction and poetry sensitive to equity and unity extensively.

Language is heart of the education and it links all the subjects together. A science, social science or mathematics class is a language class. It is important to view language education as everybody's concern at school and not as a responsibility of the language teacher alone. Hence we need to link the subjects together and lay emphasis on study skills - note-making using various graphic organizers, process writing and spoken and written communication skills- public speaking, interviewing, and debating, other reading techniques like jigsaw, map reading, SQ3R (survey, question, read, recite review). At this level, structure of arguments, opinion writing, debating skills and exposure to well-known speeches should also be brought in.

While at elementary level learning grammar is implicit and should be based on need, at secondary level accuracy through grammar can be obtained explicitly once there is enough exposure so that students can identify recurrent errors.

To summarize, it is essential to create a safe, risk free environment where errors are considered signs of development for enabling proficiency in English. A multi-linguistic and multi-disciplinary approach to learn English is required to ensure that we minimise the burden of language and ensure proficiency in English in relevant contexts.

Science

"If I have seen further it is by standing on the shoulders of Giants"

Sir Isaac Newton

Science is a social endeavour to know the natural world. Scientific knowledge is built through collaborative efforts of many. It is built based on previous discoveries. This knowledge may be abandoned or modified in light of new evidence. Hence, scientific knowledge is dynamic, ever expanding and tentative.

A variety of ways can be used to arrive at this knowledge - observation, pattern recognition, classification, making hypotheses, measuring and estimating, predicting etc. These scientific processes are based on the possibility of science being objective by ensuring that it is validated under different circumstances by different people. Scientific knowledge needs to be testable and repeatable. However, science is not entirely objective. The process of arriving at the scientific knowledge gets influenced by the existing state of scientific knowledge, the social and cultural context of the researcher and the observer's experiences and expectations.

While teaching science, we must understand that students do not come into the classroom with a blank state of mind. They do have pre-conceived notions. It is critical that these pre-conceived notions or misconceptions be identified, discussed and resolved. It is imperative to constantly evaluate students' understanding and catch on to teachable moments. These misconceptions can be elicited through pre-planned exercises, discussions, demonstrating discrepancies etc. While doing this a spirit of discovery and enjoyment needs to be maintained.

Science is a network of concepts and relationships. For students to learn the concepts, they need to be engaged and they learn the best when they find the content relevant to their age and their immediate environment. Students should be able to relate science to the world outside of the classroom and to make connections to their own lives, to their interests, and to their futures. Liberties should be given to teachers to modify the curriculum and make it contextualized. Real-life issues can create significant opportunities for organizing the science curriculum.

Science curriculum needs to be spiral, appropriate at every age, allowing the children to think and reach the final form of knowledge on their own. In the primary years the content should be relevant topics like health and immediate environment and skills that need to be focused are observation, classification, inference, drawing etc. In the upper primary years, the focus shifts to more complex concepts and skills like technological design, school projects, history of science, problem solving, graphs, data interpretations, surveys, projects and drawing inferences. In secondary stage the students can understand abstract concepts and develop complex technological modules involving design, implementation and testing. While making the children understand the concept as per their age we need to ensure that *reductionism does not compromise the basic concept* being taught.

To learn science, the focus must shift from teachers to learners. Learners should be able to construct their own knowledge by active experimentation, reflection, forming concepts and mapping it to real life situations. The child should learn at individual's pace and teacher needs to help the child take ownership of his or her learning. The learning should be based on activities in and out of classroom - stories, poems, plays etc. in primary years, simple experiments and contextualized projects in upper primary stage and introduction of technology design in secondary stage.

Discussion and collaborative learning plays a critical role in teaching science to students. This can be done by enabling students to collaborate, debate and discuss different explanations, and problem solve with other students. Discussion and debate becomes the basis of reasoning and reflection. Teachers should facilitate and provide an environment in which learners feel safe to discuss ideas and acquire inquiry skills encouraging active learning and higher-order thinking skills. Children can occasionally be paired with those at the same level or just a little above their level.

Carl Sagan had said, "Science is more than a body of knowledge. It's a way of thinking, a way of skeptically interrogating the universe." It is imperative that students develop scientific thinking and understand the process of arriving at the scientific knowledge along with the conceptual knowledge. The 7e learning cycle of elicit, engage, explore, explain, elaborate, evaluate and extend can be used to arrive at the concepts. Asking relevant questions, observations, doing experiments and inferring them are important elements of learning science. As the child progresses through grades; surveys, data analysis, simulation, project work and prediction can be used to arrive at the knowledge. These are important skills to attain scientific reasoning, scientific research skills and scientific problem solving. In order to understand the relationships between concepts, scientific understanding in the form of concept maps, structure and function, flow charts, Venn diagrams etc. becomes vital.

To summarize, science learning is a product as well as a process. These two components along with the values like respect for logic, curiosity, respect and concern for environment and living beings, openness to accepting errors, hard work and rigor are key to the process of learning and teaching science.

My Course-work

Observation coaching cycle

Lesson plan - FUNCTIONING OF THE DIAPHRAGM

Task: Insert the Lesson Plan you have implemented. At the end please make note of the Pre Lesson Conversation you had with your CT/TE.

Learning Targets and Assessments		
Long-term Targets	Supporting Targets	Assessments
I can determine how the Respiratory system functions to supply energy to the body, synthesizing conceptual ideas across its various organs and parts.	I can explain the role of the diaphragm by elaborating how the diaphragm and the lungs work together during the process of inhalation and exhalation	Formative assessment – 1. Homework Question

Introduction: Building engagement and setting purpose
Why is this lesson/sequence of lessons important and exciting work to do?
What will cause students to be curious and want to learn?
How will you provide students with a vision of the long-term target(s) in a way that involves them?

Instructional Steps	Resources Required (per child)
Teacher: What does this model represent? EA – how the lungs work/ how breathing happens/ process of inhalation and exhalation Once they get through that when the balloon at the lower end (i.e. model of diaphragm) is moved in and out the air in the smaller balloons (i.e. model of lungs) fills in (inhalation) and empty out (exhalation). The teacher then poses the question: 'Can you explain how the air in the smaller balloon fills up? After the experiment consolidation, teacher will ask students to write their learning from the experiment in their notebook.	Task sheet, Drawing sheet, Checklist

Let's watch another video.

Viewer's Purpose:

- Why do we need to breathe?
- Explain the process of breathing

VIDEO 2 & 3

Students watch the next video.

https://www.youtube.com/watch?v=J0uMU814-0M

https://www.youtube.com/watch?v=4scWsEe8bsQ

Students will take their notes simultaneously in their notebook, with some pauses as and when required.

Taking help of the model, teacher asks the following key questions: (NOTEBOOK WORK)

Q. What happens when the diaphragm moves down?

A. When the diaphragm moves down and rib cage moves out there is more space in lungs.

Q. What happens to air in the lungs when there is more space? What is the effect of this?

A. Because of this space, the air in the lungs spreads out and becomes thinner. Since it is one of the characteristics of air to rush into fill the empty space, thus the air enters into the lungs through nose or mouth. Since the air pressure outside the body is more than it is in the lungs.

Q. Similarly, can you explain the reverse process of diaphragm?

A. When the diaphragm moves up and rib cage moves in there is less space for lungs.

Because of this lack in space the air in the lungs rushes out through nose or mouth.

Teacher now releases the LT that we have just achieved:

- I can explain the role of the diaphragm by elaborating how the diaphragm and the lungs work together during the process of inhalation and exhalation.

Scaffolding plans for the body of the instruction

What sequenced moves will you and the students make to ensure that all students meet the learning targets?

How will students know what quality looks like, and how will you support them in producing quality work?

How will students work/practice together during learning?

Instructional Steps	Resources Required

Homework

Closure: Explain the answer for the following question.

- How do the diaphragm and lungs work together during the process of inhalation and exhalation?

EA: -When the diaphragm moves down and rib cage moves out there is more space in lungs.

-Because of this space the air in the lungs spread out and becomes thinner thus creating more space in lungs.

-Since it is one of the characteristics of air to rush into fill the empty space, thus the air enters into the lungs through nose or mouth. Since the air pressure outside the body is more than it is in the lungs.

-Similarly when the diaphragm moves up and rib cage moves in there is less space for lungs.

-Because of this lack in space the air in the lungs rushes out through nose or mouth.

You can take the help of your model to explain the answer for this question.

(If time permits, tell a few students to share their answers).

Additional Research Questions:

What is a hiccup?

How do fish breathe?

How do frogs breathe?

Closure

How will students synthesize their understanding?

How will we assess the effectiveness of the lesson?

Pre-Lesson Observation Notes

1. Indu: What issues that you can think of when you take the lesson?
   Answer: Children may not understand the concept of air pressure.

2. Indu: Common understanding about respiration breathing etc, what misconceptions do children have? Relation between digestion and respiration can be high-lighted.
   Can respiration happen without O2? Should we pose these questions to students? Refer to NCERT books online

3. Indu: Is there a mechanism to review task sheet? – will it be peer review?
4. Amilty: What is the possible learning difficulty for challenged kids?
   I: I cannot foresee because we have done abdominal breathing in the class
5. Amilty: What are the issues or concerns you have?

I: Diaphragm vs abdominal breathing. If diaphragm breathing is natural way to breath then abdominal breathing should be the natural way to breath. How does breathing happen during chest breathing?

I: I should have a backup kit ready

6. Amilty: Anything that you want me to observe?
   I: Wanted to make the class interesting.

Feedback/ insights/ any changes you would make to the lesson based on the discussion:

After taking the class, I realized I should have

- Created my own mini lesson plan based on my strengths and weaknesses.
- Thought of a quick way to assess children during the class

The hardest thing for me was:
I think, because it was an observation class, I wanted to complete the planned course on time. The experiment took much longer than what I had expected. Besides, I am tuned to having quick turn around and meeting deadlines because of the corporate culture. I did not pause, understand whether the children are getting the concept and adjust my lesson plan accordingly. I should have stayed with the concept for longer time. I did not give children enough time to reflect individually before the class or group discussion. It was difficult for me to manage children while doing the experiment. Forecasting issues and setting the culture target or bringing the classes attention back to culture target was something that I did not do I also, should have thought through the ways of getting the kids attention to begin with, create lesson interesting enough for children to pay attention to.
What could I possibly change/modify/focus in the next session:
I created my own mini lesson plan based on my strengths and weaknesses. I am getting a better understanding of the knowledge and grasping level of class 7 children. This will enable me to estimate the pace of class and handle it accordingly I should pause and do a quick assessment of where children are so that I can catch on the teaching moments in the class. I should give them enough time to think I should have been better at classroom management that involves Getting a hang of what is the mood of children and adjust leaning plan accordingly Pausing till there is complete silence Moved around freely around all the crews Used cold calling for asking questions Asking children to add on to the topic I should keep a track of time and have a proper closure for each class
What aspects of your teaching approach will you look at changing in the future? How will you go about doing this?

What have you found useful/not so useful about the observation process? What issues or concerns do you have about the planning, observation or reflection process?

Since the experiment was taking a long time, I wanted to teach something so that the time scheduled for observation gets utilized. Hence, I wrapped up the experiment quickly. I also moved from one concept to another rather quickly.

I need to keep in mind that the class I am taking is for the children and not for the people to observe. I need to be true to the concept of teaching children, and not to the process of observation.

It will help if the pre-observation is done together with CT and TE and given more time. Pre-observation should be on my mini lesson focusing on content and teaching method. I should take help as much help from CT and TEs as I can.

This whole cycle has been extremely beneficial for me and I am hopeful it will help me improve.

Lesson Plan – Motion

MOTION

Long term Learning Targets:

1. I can explain the concept of motion and its types
2. I can create and understand the graphs of motions
3. I can understand the relation between Speed, Time and Distance

Day- 1
Learning targets: I can explain "What it means for an Object to be in MOTION".   **Supporting Target:** I can stay focused on task. I can record my observations in the given format.
Resources: Field, module notebook and pen / PPT
Formative Assessment: Traffic signal round

Instructional Steps:

Learning Experience (OPTION 1): Move quietly to the field below.
1. Sit at a particular place quietly with your notebook.
2. Look at the objects moving carefully.
3. Record the objects that are moving, in your notebook.
4. Record in the following format – Object, At Rest, In Motion.
5. Discussion in the class related to the word 'motion'.

Learning Experience (OPTION 2): Show a small video of a Fair
https://www.youtube.com/watch?v=pOrhbfiWOQ4&feature=youtu.be&start=366&end=580&autoplay=1
1. Look at the objects moving carefully.
2. Record the objects that are moving, in your notebook.
3. Record in the following format – Object, At Rest , In Motion.
4. Discussion in the class related to the word 'motion'.
   (Notebook work)

Teacher to stop the video at 10 minutes.

Object	In Motion	At Rest	How I know that the object is in Motion/at Rest

Key Questions:

Teacher to elicit that when an object changes its position its said to be in motion
   When do you say an object is moving?
   In the above examples, is the motion of the same type?

Show the students the PPT - Introduction to Motion

Teacher: What do you think is happening? How do we decide if something is moving or not?

The motion of an object is movement as measured by an observer or with respect to a fixed object

Example:

1. When we are walking with respect to earth that is at rest
2. When earth is moving around the sun with respect to sun that is at re

Closure/Exit Ticket: Summarizing the term 'Motion' related to objects at rest.

An object is said to be in motion if it changes its position with respect to a fixed object in a given time. If an object does not change its position with respect to a fixed object, it is said to be at rest.

MOTION

Long term Learning Targets:

1. I can explain the concept of motion and its types
2. I can create and understand the graphs of motions
3. I can understand the relation between Speed, Time and Distance

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Day-2

Learning target:

I can make the toy according to the instructions given.

I can identify the type of motion exhibited by my toy.

Supporting Target:

I can help my crewmates in completing the task.

I can discuss quietly in my crew.

I can be focussed on the task at hand.

I can be focussed when other crew members are presenting their work.

Resources:

sheets of paper, scissors, newspaper, ruler, pencil, straw, tape, thick paper card, paper clip and notebook, Toy Sheet procedure (8 toys – process for creating the toy models)

Opening (silence, unpacking of LTs)

Learning Experience:
1. Teacher distributes the instruction sheets. (one sheet per crew)
2. Students go through the instructions in their crew and would collect the resources required from the teacher's table.
3. Students would be handed over the study material (one per crew)
4. Students make the toys in their crews and also would prepare their presentation after reading the sheet given to them.
   Criteria for presentation –
   1. Toy should be working, should show some kind of motion.

2. Type of motion shown by the toy should be shared.
3. Process of making and process of working should be shared clearly.
4. It is a crew presentation.

Closure/Exit Ticket:

Appreciation

Feedback and learnings from peer crew members.

Homework:

Video:

 (Option 1) https://www.youtube.com/watch?v=q6_bc3BDV4E&feature=youtu.be&t=3

NCERT link – video about the different types of motion.

Viewer's purpose:

What is the main characteristic of rectilinear and curvilinear motion?

Is there any difference between rotatory and circulatory motion?

What is the relation between oscillatory and periodic motion?

Galileo reading – page 147 NCERT text book.

There is an interesting story about the discovery that the time period of a given pendulum is constant. You might have heard the name of famous scientist Galileo Galilie (A.D. 1564 –1642). It is said that once Galileo was sitting in a church. He noticed that a lamp suspended from the ceiling with a chain was moving slowly from one side to the other. He was surprised to find that his pulse beat the same number of times during the interval in which the lamp completed one oscillation. Galileo experimented with various pendulums to verify his observation. He found that a pendulum of a given length takes always the same time to complete one

oscillation. This observation led to the development of pendulum clocks. Winding clocks and wristwatches were refinements of the pendulum clocks.

MOTION

Long term Learning Targets:

1. I can explain the concept of motion and its types
2. I can create and understand the graphs of motions
3. I can understand the relation between Speed, Time and Distance

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Day-3

Learning target: I can identify the different kinds of motion

Resources: Types of motion sheet

Opening (silence, unpacking of LTs)

Learning Experience:

1. Teacher to consolidate the types of motions. (refer Note to Teachers) – Notebook Work

   Note to teachers

   a) Translational motion – when the body moves either in a straight line or in a curved path. It's a motion in which all points of the moving body move uniformly in the same line or the same direction.
      - Rectilinear – When a body moves in a straight line eg: athelete running 100 m race, light
      - Curvilinear – when a body moves in a curved path eg: planet revolving around the sun
      - Circular – Revolution of earth around the sun
   b) Rotational – When an object stays at one place and rotates around an axis eg: fan, spinning top
   c) Random motion – Motion in which direction of motion is not fixed
   d) Oscillatory motion – When an object swings to and fro about a mean position. Eg: Pendulum, Swings.
   e) Vibration of guitar string is very fast oscillatory motion and is called vibratory motion
   f) Periodic motion – When a body repeats its movement continuously having the same time gap. Periodic motion is when the motion of an object continually repeats itself at equal interval of time. This can be repeatedly moving back and forth or it could be moving in a circular orbit or rotation.

2. What is the main characteristic of Rectilinear Motion?
   When object moves in a straight line.

3. Is there any difference between Rotatory and Circulatory Motion?

Rotatory motion is around an axis. Circulatory motion is a type of translatory motion where object moves in a curved path that is a circle.

(NOTE: Rectilinear motion is just one type of translatory motion. Consider the following three kinds of motion:

1. A ball rotates.
2. A ball does not rotate, but slides along the floor along a circular path.
3. A ball slides along the floor along a straight path, with no rotation.

The first case is neither translatory nor rectilinear motion. Each particle of the ball is travelling along a different path. Atoms of the ball which are closer to the axis have shorter radius, while those further away have longer radius of movement. Such a motion is n translatory motion.

Case 2 and 3 both have one aspect same: the path followed by the different particles. Say for instance, consider case 2. Each atom the ball has the same radius of its path. Even though the motion is circular, the motion is known as translatory. When a car moves forward, the doors of the car have translatory motion while the wheels do not.

Case 2 and 3 have one main difference. Case 2 has particles of the ball following a path that is not a straight line, but a curve. Case shows each particle of the ball moving in a straight line. So, although both motions are translatory, motion 2 is not rectilinear. Motion 3 is rectilinear while motion 2 is circular. Circular motion must NEVER be confused with rotation - rotation is not translatory, like in case 1. Circular motion is totally translatory. The difference is the same as between the rotation and the revolution of the Earth. Think of a planet which does not rotate but only revolves - it would travel in circles, but it would not spin. That is what translatory motion is all about)

4. What is the relation between Oscillatory and Periodic Motion?

   All oscillatory motions are periodic motions. But all periodic motions need not be oscillatory.

   Eg: revolution of earth around the sun

Closure/Exit Ticket: Collecting their individual respective sheets and pasting the sheet in their notebooks.

Homework:

Give the "Types of motion" sheet to the students. Students would be asked to write the type of motion after looking at the pictures in the sheet.

Lesson Plan – Forms of Government

Standard	Learning Target
Identify key elements that influence the functioning of Democracy; Identify key elements that influence the functioning of Democracy.	**Overall Plan:** I can justify how Democracy as a political system is favorable for ensuring equality, dignity and justice in society. I can identify key elements that influence the functioning of Democracy I can explain other forms of governance that exist around the world.
Procedure	

Objective:
1. What is government?
2. Understand the different forms of government.

3. Democracy as the best form of government with respect to equality and justice

Day 1:

Resources Required:
6 case study sheets for each crew,
Presentation deck on forms of govt,
Readings on the different types of government for each student.
Graphic Organizer

Step 1:

Introduction: - 10
Students have already experienced the gallery walk. And they have also experienced inequality in terms of the game that they have played.

Teacher to ask the following questions to the students:
We had played a soccer game. Why did you feel the way you felt? What were the key elements missing in it? Or what do you think could have prevented such feelings to arise?

Teacher to elicit answers like – Rules were not established, Referee didn't understand the rules

Teacher to ask: So, if we extrapolate the situation to our country where there is inequality do you think we need rules? Who forms these rules? Who implements the rules?

Teacher to write down the words like 'Government' or 'Leader' or 'Prime Minister' on the board if its comes up in the discussion

Teacher: What is a government?

A government is a system by which a community or country is controlled
How is a government formed? Let us do an exercise on the same.

Step 2: -

The case study will be done crew-wise. It has country that is gaining independence and we need to decide who will form the government. There are 6 different groups of people in the country. Each member of a crew is given a group to represent – military, working poor, working professional, monarch's family, ethnic minority

Teacher to create a jigsaw so that all members representing a working group (child group) can get together and discuss on why and how they want to form the government. They do additional research and go back to their original crews. The original crew (parent group) now has representation from all the groups. The crew will debate and discuss on who should form the government

Instructions for the students:

1. Each member of a crew is given a group to represent – military, working poor, working professional, monarch's family, ethnic minority
2. Instructions
    Objective: Convince you team members on why you should have a say in the government.

    - Each group will meet for 5 minutes to discuss on why they should form the government
    - Crew members will come back to original crew
    - Brainstorm with other team members and convince each other of their point of view
    - Brainstorming of the same should be done as follows.
        o   Each member will get a minute to talk about their point of view in turns

       ○ They can start with reading the case they have been given to the rest of the group
       ○ They should state at least 2 points in favor of their point of view.
       ○ The crew will then discuss each other's point of view
       ○ Each crew member should assign the following roles amongst themselves. The roles can be rotated after 2 or 3 people have discussed
      • Whole class discussion will be done based on the presentation done by the working groups
    - A moderator who ensures that the following rules are being followed
      a. The group should welcome all views however different if they adhere to group's rules
      b. There should be no attempt to create a winning team
      c. In case there are two foul strikes by the member then the member will be removed from this discussion for the day.
      d. In case there are four foul strikes by the member then the member will be removed from this discussion for the entire lesson
    - A time keeper
    <u>RULES – Don'ts</u>
    - No name calling is permitted
    - State the reason or evidence for your disagreement. If you cannot state your points and defend your argument, then merely calling your opponent names does not make you superior
    - Appreciate the strength of other's arguments.
    - Stay within the limits of the topic

Step 3:

Teacher to show the following video on the different forms of government.

https://www.youtube.com/watch?v=vdh9xo47OWM (Till before it starts talking about socialism and communism)

Step 4:

Post the video,
1. Teacher will hand over the different forms of government readings – crew-wise.
   The readings will need to have glossary so that students can interpret the text easily.
   The students will do additional research, organize their ideas in the form of a graphic organizer. The graphic organizer should contain - Head of State, Length of rule, how if power acquired, key decision makers, Pros and Cons of the form of government.

2. Each crew to take 20 minutes for a close reading and another 10 minutes for their presentation on the form of government they have received.

3. The pros and cons to be written in a graphic organizer / types of government chart and pasted in their notebooks.

Day 2:

Resources Required:

Presentation deck on forms of govt,
Forms of government worksheet

Instructions:

1. Each crew will continue presenting their form of government
2. Teacher to consolidate the different forms of government ppt.
3. To explain the different government forms and teacher to elicit the pros and cons as an overall class discussion.
4. Teacher to explain the Democracy government in detail. Can elicit question like

T - Is there any significant difference between democracy and the earlier form of governments we discussed with respect to how power is acquired and length of rule?

Expected answer - Voting (power to elect), Also power to remove post term ends

T – Pros and Cons?

S – Human rights

T - Data to prove it

Teacher to project the democracy document and data point given there

- What is direct democracy?

Is majority government the right form of government? Does it bring equality?

5. What form of government would you propose for Syldavia in relation to equality and justice?

Closure:

Teacher to circulate the worksheet on the forms of government worksheet as homework.

Students to complete the same and paste it in their notebooks.

Opinion - No Detention Policy

Introduction

The 'no detention policy', under the Right to Education (RTE) Act, states that until class VIII, no child can be held back or expelled from school.

The policy is a part of comprehensive and continuous evaluation. CCE meant that a child is evaluated on various other aspects like social, personality, attitudes and values displayed. It emphasises on evaluating a child through the year and not just based on performance in one or two term exams. Conducting unit tests, for fewer marks, could also help to make students accountable without adding to the stress

Why No Detention Policy?

The policy was introduced to **reduce the anxiety** for children because of examination results. The main purpose being to **ensure compulsory education up to the age of 14 years, and prevent dropout rate** in schools especially in rural areas of India.

CCE if implemented well is non-threatening, releases the child from fear of failure and enables the teacher to pay individual attention to the child's learning and performance. The main aim of CCE is to evaluate every aspect of the child during their presence in the school. It was also introduced to **reduce the workload of children by taking continuous tests** of the students throughout the year.

NDP was introduced to bring about **equity and justness especially for girls and children from low income groups**. The idea was to bridge in the inequality in education especially because of lack of opportunity for the socially and economically disadvantaged children. Students from economically disadvantaged backgrounds already face many barriers and struggles in their lives because of not getting a good education.

Many **job opportunities** like peons, drivers, delivery boys, security guards, etc need a minimum qualification ranging from being a **Class 8 pass** to a Class 12 pass depending upon the organisation. The children who can are 8th pass and know basic English skills can easily get jobs and move up the social ladder. This would not have been possible if the person would have failed or dropped out because of lack of infrastructure and opportunities. Similarly, for girls who may have failed because of grade retention, it would have resulted in them dropping out from school and hence their early marriages.

In India, education is considered important for a job, good money and a better standard of living. Unfortunately, revoking the NDP will primarily deprive the economically disadvantaged and act as a serious disincentive because it will have a domino effect.

Issues with NDP

Introduction of NDP has resulted in students develop a laid-back attitude as they do not want to study when there is no fear of failing. A large number of teachers have reported that some of the students don't even come for the exams as there is no fear of repeating the class. Teachers have no power over students. On the other hand without adequate checks and

measurements, teachers were found to be slacking off. Several studies have showed that **learning outcome in schools have been poor over years**.

According to the 2016 edition of "Annual Status of Education Report" (ASER) less than 48% of children in class V can read a class II-level textbook; only 43.2% of class VIII students in rural India can do simple divisions; only one out of every four students in class V could read an English sentence.

After the RTE was enacted, the process of reform did not go down smoothly. A common misconception was that no-detention meant no assessment. This has since been clarified by the MHRD. Guidelines for implementing CCE were issued at various points of time by the CBSE, NCERT and state-level bodies. However, **CCE proved difficult to implement and monitor** and teachers lost leverage over students with many government schools turning into mere "mid-day meal" providers.

There is **no differentiation between intelligent, average and poor students**, say teachers. Private schools were directed, well in advance, to ensure that no student is detained.

A large number of **private schools screen 'academically weak' students** so they can concentrate on just the good performers to attain a centum in the Board examination.

This situation is **promoting the idea of coaching classes**. The students who don't pay attention in classes go to the coaching classes to get the passing grade in the Board examinations.

In the past few years, many cities have witnessed **a rise in the number of students failing their class IX exams**. Without proper checks and assessments, the gap between the grade's expectation and student learning become too high by the time he/she reaches grade 8. In Delhi, for instance, the number of repeating students as a percentage of total students enrolled in class IX rose from 2.8% in 2010 to a startling 13.4% in 2014 (as per DISE data). According to news reports, a similar increase has been seen in Nagpur, and in Chandigarh, 27% of class IX students studying in government schools have failed their final exams this year.

The Current Debate

The no detention policy is widely being blamed for deteriorating learning levels across schools in India.

The New Education Policy (NEP) was released by HRD Minister Smriti Irani in June 2016. The policy draft has been prepared by the TSR Subramanian Committee and includes several recommendations that need both debate and deliberations. One such is the revision of the "no detention policy" (NDP).

TSR Subramanian committee for formulation of the National Policy on Education has also suggested that 'no detention' policy should be discontinued after Class V. It had recommended restoration of detention provision, remedial coaching and two extra chances to each student such to move to a higher class. At the upper primary stage — that is after class V — the system of detention would be restored, subject to the provision of remedial coaching and at least two extra chances being offered to prove a child's capability to move on to a higher class. The idea is that a student who is performing badly is given the scope to improve, but with a timeline.

- A sub-committee of the Central Advisory Board of Education also studied the issue closely and recommended a provisional detention clause at Classes V and VIII. In 2013, a parliamentary panel had also asked the ministry to 'rethink' on its "policy of automatic promotion up to Class VIII".
- Most states favour doing away with 'no detention'. However, Goa, Telangana, Karnataka and Maharashtra have opposed the scrapping of the policy, pointing out that dropout rates decreased very significantly after mass promotions were allowed.

However, according to the Geeta Bhukkal Committee, the first batch of students who passed class VIII without detention, wrote their class X exams in the academic year 2012-13. The pass percentage in CBSE schools was 88.85% in 2009, one year before the RTE, but rose 10 points to 98.18% in 2012.

My Opinion

In India, the basic systems are not in place and the quality of education in government schools is dismal. There are some real constraints in terms of teaching, measurement and infrastructure.

Many government schools in India are facing acute shortage of teachers and the available teachers are burdened with non-school activities. Until the desired pupil-teacher ratio is achieved, it is unreasonable to expect CCE and NDP to succeed.

Other factor responsible for poor learning outcomes is the lack of trained teachers. Lack of training has caused the confusion among the teachers on what their role is in implementation of CCE guidelines. Teacher training must be revised in line with the requirements of CCE.

On the other, minimum qualifications for future job opportunities are such that students from low income families would be left in the lurch with nowhere to go.

Hence a drastic reversal in policy without wider discussions and consultations would amount to a retrograde step. It would be especially detrimental if it meant going back to a system acknowledged as poor–as it was based solely on a pass-fail calibration of learning. The foundation of the education system has to be made ready for reform. Reform should not be held responsible for existing cracks in the foundation. Instead, efforts to strengthen the foundation should be the objective of policy. Detention is punishment to the child for the failings of the education system, so it's cruel and unjust, along with being completely

Education in true sense is helping the individual to be mature and free, to flower greatly in love and goodness

Real learning comes about when competitive spirit has been ceased.

- J Krishnamurthy

Education and learning is not separate from life. If we consider whole life as learning then the concept of CCE is a welcome change to examination centric competitive culture that exists in India. In fact, CCE allows for students to be assessed on non-cognitive as well as non-academic areas of learning. In this way, a child need not be 'failed' simply because of non-performance on a narrowly defined and rigid set of indicators. Here again, there was, and perhaps still is, a lack of awareness regarding the finer points of CCE as well as of its implementation.

In my opinion, the no-detention policy is based on sound principles of pedagogy and assessment. Scrapping the policy all together will be worrying because:

- Assessments today are based on what is easy to assess rather than the learning and hence passing and failing students based on examinations is unfair to the children.

- Failures in implementation are being looked upon as failure of policy. The CCE has failed to take off in most schools, owing to lack of basic capacity and awareness. In the absence of an effective system of comprehensive assessment along the lines of CCE, which enables learning, a no-detention policy becomes meaningless. The result is anomalies like the large number of repeaters in class IX. This does not mean that the policy itself is flawed.

- Assumption that students can only learn under the threat of failure. If this is a common belief, then we need a bigger reform in the education system within our country

- Grade retention does not improve learning. Even Geeta Bhukkal Committee—a sub-committee under CABE set up to look into this matter—admits that there is no research anywhere in the world which establishes that repeating a year helps children perform better.

- Research does say that repeating has adverse academic and social effects on the child. A more constructive discussion would focus on specific educational strategies to facilitate the education of children at-risk of academic failure

  Research from both New York City and Chicago are consistent with findings elsewhere and serve as examples. In New York City, retained students did not improve academically, despite intensive interventions and retained students "dropped out at substantially higher rates" than non-retained students. In Chicago, students retained at the 8th grade gate who were already older than their age cohort, often because of previous retentions, did not complete high school by age 19 at a rate of 78% In Chicago, racial gaps in the dropout rate grew, with African American students most negatively impacted. In Chicago, dropout rates for non-retained students decreased slightly, intensive interventions for retained students did not ultimately increase achievement or counterbalance the negative impact of retention

- Grade retention is expensive. It results in wastage in the schooling system due to high repetition and high dropout rates

- There is a big risk that if one or two states adopts grade retention then others will follow resulting in greater inequalities within the country.

Way Forward

At the same time, India cannot afford mediocrity. We cannot let teachers fall to the basic minimum level to teach a classroom. We need to stretch students to perform their best without putting too much stress on them. Hence,

- **Raising the quality of classroom teaching, through**
    - Nationwide teacher training program/scheme

- Use of technology to provide content and pedagogy to teachers and students in vernacular language
- continuous monitoring of teacher and student attendance
- The student- teacher ratio in the class should be kept to manageable limits.
- Regular orientation and training of the in-service teachers should be done to acquaint them with the principles and strategies of the policy needed for its successful implementation.

- The funds required for grade retention can be diverted to more constructive programs around early childhood learning programs, after-school and extended-day activities, a summer school for struggling 1st and 2nd graders, and vision screening and free eyeglasses need to be put in place

- **more effort needs to go into designing a workable, accessible framework which meets the objectives of continuous and comprehensive assessment.**
  - Its critical to measure learning level outcome for all children
  - Catalysing culture based on performance on all-round development of children
  - Providing bridge courses for slow learners during summer (2-3 months program)
  - Raising the awareness amongst parents on the need for CCE and ensuring attendance of children

- Skilling program to be integrated post grade VI to reduce the gap between demand for skilled labour adult force and supply of skilled labour.

- High performances can be assessed and rewarded through optional programs that tests the conceptual understanding of the students

A schooling system that caters to every child using a uniform test/assessment is a challenge given the diversity that exist in our country. The answer lies in making education contextualised and empowering the teachers. How teachers manage weaker students— whether they create environments that make low-achieving students feel supported and efficacious in responding to new demands and whether they direct students' efforts in productive ways—has an important impact on student motivation and passing rates.

While grade retention policy may temporarily improve pass percentage, it does not create a long-term impact on the students. Moreover, it may the push those who fail and the hard-to-reach students out the schoolhouse door sooner than before. It may have a disproportionate impact on the weaker students.

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