Constructive Approach of Educational Innovations to enhance Creativity and to solve Emerging Problems of Schools

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"Education is the manifestation of divine perfection already present in man" –

(Swami Vivekananda)

I hear and I forget.

I see and I believe.

I do and I understand. - Confucius

ABSTRACT

Basically teaching must include two major components sending and receiving information. A teacher tries his best to impart knowledge as the way he understands it. So, any communication methods that serve this purpose without destroying the objective could be considered as innovative methods of teaching. The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the human development goal for the country. Educational Innovational Network is a permanent forum for reflection and debate on innovation and educational change, which is aimed at creating a culture of innovation among teachers and schools. This is done through identifying, systemizing and disseminating innovative experiences, researching and evaluating innovations, and generating knowledge both from and for practice, exchanging experiences and practicing critical reflection. Thus, INNOVEMOS has become a valuable reference for decision-making on educational policies and practices that help improve the quality of education at all levels and in all forms without exclusion. The best practice provides a way of bridging gaps between current insistence on summative assessment and a lack of ways of incorporating creativity into this. It allows for teachers to assess both process and product and for students

with non-traditional backgrounds to build on their strengths in collaborating with others to critically evaluate knowledge, create new ideas and solve problems rather than recall facts or produce individual responses.

INTRODUCTION

Education is an engine for the growth and progress of any society. It not only imparts knowledge, skills and inculcates values, but is also responsible for building human capital which breeds, drives and sets technological innovation and economic growth. In today's era, information and knowledge stand out as very important and critical input for growth and survival. Rather than looking at education simply as a means of achieving social upliftment, the society must view education also as an engine of advancement in an information era propelled by its wheels of knowledge and research leading to development.

The scheme entitled Innovative Practices in School and Teacher Education was initiated by NCERT for school Teachers and Teacher Education was formulated during 1960's and was in vogue till 2005. National Curriculum Framework 2005 under the heading "Encouraging Innovations" entitled "Systemic Reforms" has made the following observations: Individual teachers often explore new ways of transacting the curriculum in addressing the needs of students within their specific classroom context (including constraints of space, large numbers, absence of teaching aids, diversity in the student body, the compulsion of examination, and so on). These efforts, often pragmatic but also creative and ingenious, by and large remain invisible to the school and the larger teaching community, and are usually not valued by teachers themselves.

The sharing of teaching experiences and diverse classroom practices can provide opportunities for an academic discourse to develop within school as teachers interact with and learn from each other. This will also encourage new ideas and facilitate innovation and experimentation. How can innovative and creative ways of teaching and learning be encouraged and supported by the system so that they can become a body of practice that can be brought to a stage when they can be built back into the system? For a start, there is a need to create structured spaces within schools, and at the level of the cluster and block where teachers are encouraged to share and discuss classroom practices and experiences. If seen as

worthwhile, some of these ideas and practices can be systemically followed up. It is also important to bring together groups of teachers within and across schools and provide support to them in terms of resources as well as time to work together. There is also, a need for documentation and research of identified good practices in education.

All these practices need time and space out of scheduled time-tabling to engage in more creative and innovative activities, and a major factor for success is the motivation of the teachers, tutors and other staff involved in setting up the activity, which should also translate into motivation of pupils and students. The educational actors involved in these projects see creativity as arising from everyday life and value its spill-over effects on learning.

At the same time, it seems that creativity and innovation are stifled by an overloaded curriculum, by lack of time for flow in the teaching and learning schedule, by other systemic barriers such as summative assessment and league tables. This leads to a need to rethink the current compulsory educational provision, reshaping curricula, assessment schemes, schools' evaluation methods and possibly institutional priorities.

. More practical way of teaching by installing computers and providing Internet Services is the need of the hour. Computers and internet connections could be used to write blogs, mobile phones and digital cameras to take photos of buildings, bridges or rural areas, art materials to paint portraits of endangered species or people at work; calculators to measure and calculate, children used musical instruments, human bodies, paints, cameras, printers and ink, or Power point, paper, pens and blogs to make presentations. In terms of time, the projects since 2008 have been scheduled to coincide with the summer term when the senior students are either on study leave or have left after examinations, thus leaving some teachers with a few lessons release time which could be devoted to the project.

FEATURES AND PEDAGOGIC CONTEXT IN CREATIVITY

The idea of creativity is as complex and varied as its current use in education policy . For educational stakeholders attempting to identify good practices in relation to creativity and education, it is helpful to frame these definitions as a

series of structured oppositions as suggested in a booklet designed by a member of the team for the evaluation of creative learning projects in UK schools (Banaji and Burn 2007):

- Elite/individual/genius or democratic/sociable/collaborative,
- Original/from nothing or generic/transformative,
- Arts-specific or residing in all human endeavour,
- Spontaneous or taught and learnt,
- Ubiquitous or special,
- Universal or culture-specific,
- Imaginative and intuitive or knowledge and skills-based,
- Process-based or product-led,
- Ineffable and instinctive or quantifiable and testable,
- Emotional or rational.

THE COMMON QUESTIONS GENERALLY ASKED ABOUT CREATIVITY ARE

- Does creativity reside in everyday aspects of human life or is it something special?
- What counts as evidence of creativity in educational contexts?
- What is the difference between ‘good’ pedagogy and ‘creative’ pedagogy?
- What is the difference between creative teaching and learning and ‘good’ or ‘effective’ teaching and ‘engaged’ or ‘enthusiastic’ learning?
- Is there creative learning that does not deliver effective educational outcomes? Is there creative teaching that does not entail creative learning?
- Is creativity necessarily collaborative and pro-social rather than disruptive, chaotic or even rebellious?

OTHER QUESTIONS CONSIDERED INCLUDE

- How significant is play as a component of creativity – do our best practices build in time for this kind of activity?
- How can cultural consumption be connected to 'creative' production? How are the out-of-school cultures of students and teachers valued and incorporated by the good practice?
- What is the relationship between creativity and innovation as cognitive processes and as socio-cultural processes? How are teachers' lives and livelihoods, their individual contexts and those of their students affected, altered by and/or constraining to the scope of the topics and ideas included in their daily work?

As generally seen several of the good practices highlight the use of ICT to develop Creativity and Innovation.

OBJECTIVES

- The objectives of some of the learning materials foreground the importance of several aspects of creative learning: challenge, self-reflexivity, critical thinking, process, exploration and an open-minded attitude:
- Use the Internet intelligently and effectively.
- Learn how to master a wide range of attitudes, insights and skills.
- Be aware of own learning style.
- Be able to reflect on own experiences and take different courses of action that are analogous of different situations.
- Demonstrate ability to effectively focus on a task at hand.
- Take initiative, organize, plan, display or execute a project alone or as a part of a group.

The schools also need to have resources in terms of computers and internet access for students and teachers; as well as the possibility of the children accessing

the site from their homes – in order to enable cross-school communication. In terms of training to use the learning environment, the FUNecole® teams offer three days of coaching to all new teachers inducting them in the philosophy, thinking styles and pedagogies of the website and materials. The capacity to train is planned as a rolling initiative to be devolved to different countries as the initiative spreads.

DEMERITS OF CHALK AND TALK METHOD OR ONE WAY FLOW OF INFORMATION

- Teachers often continuously talk for an hour without knowing students response and feedback.
- The material presented is only based on lecturer notes and textbooks.
- Teaching and learning are concentrated on "plug and play" method rather than practical aspects.
- The handwriting of the lecturer decides the fate of the subject.
- There is insufficient interaction with students in classroom.
- More emphasis has been given on theory without any practical and real life time situations.
- Learning from memorization but not understanding.
- Marks rather than result oriented.

Various strategies, aims and resource materials are all directly related to creative learning and an environment which will motivate primary aged children to discover, think, argue, build and experiment. The presentation of the learning platform and curriculum and the age-based materials have very high production values compared to most of the other teaching resources There is also a sense of systematic progression in relation to emotional development and intellectual cohesion with these materials that is hard to find if looking randomly. Potentially, such materials could initiate space for creative learning in schools where the time and motivation exists to incorporate this alongside the mainstream curriculum. This is widely applicable across primary school but requires three key resources:

commitment on the part of schools and government; funding to purchase a license for the materials; and training for teachers in how to use them.

INNOVATIVE TOOLS

Multimedia, is the combination of various digital media types such as text, images, audio and video, into an integrated multi-sensory interactive application or presentation to convey information to an audience. Traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. As such, many institutions are moving towards problem based learning as a solution to producing graduates who are creative; think critically and analytically, to solve problems. In this paper, we focus on using multimedia technology as an innovative teaching and learning strategy in a problem-based learning environment by giving the students a multimedia project to train them in this skill set.

Currently, many institutions are moving towards problem-based learning as a solution to producing graduates who are creative and can think critically, analytically, and solve problems. Since knowledge is no longer an end but a means to creating better problem solvers and encourage lifelong learning. Problem-based learning is becoming increasingly popular in educational institutions as a tool to address the inadequacies of traditional teaching. Since these traditional approaches do not encourage students to question what they have learnt or to associate with previously acquired knowledge (Teo & Wong, 2000), problem-based learning is seen as an innovative measure to encourage students to learn how to learn via real-life problems (Boud & Feletti, 1999).

The teacher uses multimedia to modify the contents of the material. It will help the teacher to represent in a more meaningful way, using different media elements. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements into the project, the students are able to learn better since they use multiple sensory modalities, which would make them more motivated to pay more attention to the information presented and retain the information better. Creating multimedia projects is both challenging and exciting. Fortunately, there are many multimedia

technologies that are available for developers to create these innovative and interactive multimedia applications (Vaughan, 1998).

These technologies include Adobe Photoshop and Premier to create edit graphics and video files respectively, Sound Forge and 3D Studio Max to create and/or edit sound and animation files, respectively. They can also use an authoring tool such as Macromedia Director or Author ware to integrate and synchronize all these media elements into one final application, add interactive features, and package the application into a distributable format for the end-user. Another advantage of creating multimedia projects in the classroom setting is that when students create multimedia projects, they tend to do this in a group environment. By working in a group, the students would have to learn to work cooperatively and collaboratively, using their group skills and a variety of activities to accomplish the project's overall objectives. The following methods could help making children creative:

(1) MIND MAP

Mind maps were developed in the late 60s by Tony Buzan as a way of helping students make notes that used only key words and images, but mind map can be used by teachers to explain concepts in an innovative way. They are much quicker to make and much easier to remember and review because of their visual quality. The nonlinear nature of mind maps makes it easy to link and cross-reference different elements of the map. Mind Maps are also very quick to review, as it is easy to refresh information in your mind just by glancing once. Mind Maps can also be effective mnemonics and remembering their shape and structure can provide the cues necessary to remember the information within it. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes.

The key notion behind mind mapping is that we learn and remember more effectively by using the full range of visual and sensory tools at our disposal. Pictures, music, color, even touch and smell play a part in our learning armory will help to recollect information for long time. The key is to build up mind maps that make the most of these things building on our own creativity, thinking and cross linking between ideas that exist in our own minds. As the recent research point that

any particular information explained with the help of graph charts make a high impact in the minds of the people and keeping this as the core aspect the teachers may try to picturize the concepts and show the same to the students

STRENGTHS OF MIND MAP

- Creates clear understanding
- PowerPoint can be used widely.
- Innovative thinking improves

(2) TEACHING WITH SENSE OF HUMOUR – "HUMOUR AN EFFECTIVE MEDIUM OF TEACHING"

Everyone loves a teacher with an infectious sense of humor. Looking at the lighter side of life not only fosters cordial relations between professors and students, but also provides welcome relief while trying to follow a difficult lecture on a complicated subject. When there is a willingness to change, there is hope for progress in any field. Teaching is a challenge. Learning is a challenge. Combining both effectively is a challenge. Being humorous is a challenge. Humor strengthens the relationship between student and teacher, reduces stress, makes a course more interesting and if relevant to the subject, may even enhance recall of the material. Humor has the ability to relax people, reduce tension, and thereby create an atmosphere conducive for learning and communication.. In conclusion, humor not only plays an important role in the healing process but is also very important in education.

(3) Z TO A APPROACH

This approach attempts to explain the application part of a particular concept first. So here the use of promotion is explained first and later students would get interest in knowing what are promotions and awards. The teacher starts explaining what is promotion and explains what motivation theory in management

STRENGTHS OF Z-A APPROACH

- Makes a particular concept clear

- Students develop interest to know exactly the concept.
- Creates long lasting memory/correlation of a concept.

For example, here the teacher explains how two objects reach the ground if they are put from a particular distance from ground level. Traditional way of teaching method will be explaining the theorem first and followed by its application. But this Z-A approach goes opposite in a manner that the proof or application is explained first and later the theory. Then it is explained that this the concept developed by Galileo. The above example of tower depicts a (possibly mythical) experiment in which Galileo dropped two objects from the leaning tower of pisa to demonstrate their comparable rate of descent.

(4) MNEMMONICS WORDS- WORDS –WORDS APPROACH

Here the teacher is not supposed to talk on a particular concept for a quite long time. But to make it clear to the students he can just go on saying mnemonics or its associated meaning in words. Here he goes on saying only words instead of sentence, and once they come to a basic understanding of the meaning of a particular concept then the teacher will explain in sentences. For example in teaching language courses this technique can be used as an effective medium by the teacher to develop word power.

STRENGHTHS OF WORD-WORD APPROACH

- Word power increases
- Teacher also gets to know many words pertaining to a particular concept.

(5) OPEN AIR CLASSROOMS OR OPEN AIR SCHOOLS

Open air classrooms – or even open air schools – are not unique to Estonia. They were pioneered in developing countries such as India – the famous open-air school Shantinikhetan – in order to deal with issues of overcrowding, lack of school buildings and a growing population in need of education. Nor are open air schools always a creative or innovative break in some children's school day where they move from a contained and constricting interior to an out of doors area where they can be closer to nature. In some city environments, pavement schools operate literacy and numeracy classes in the most traditional manner for children with no

other access to schooling. However, open air schools and classrooms have also been used in a range of innovative ways, (Cruickshank, 1977; Kingsley, 1913; Ayres 1910).

Activities undertaken range from collecting samples and data for biology and geography to drawing, writing and physical activity. In these open air classes it is a set practice to stimulate students' creativity, curiosity and 'learning by doing'.

In such lessons students might have to make their own measuring devices for aspects of the weather or use digital technology to record and create implements to aid in research on agriculture, biology or geography projects. In one open air class session about meteorological conditions, for instance, students were asked to use materials at hand to create their own instruments to measure and demonstrate the speed of wind. In pairs or teams they constructed a variety of instruments and demonstrated their thoughts and how the instruments would be intended to work in the open-air classroom. Both successful and less successful instruments were evaluated in terms of their imaginative scientific potential in a real environment.

In other cases, domestic animals may be kept, looked after and studied, or plants and herbs planted, monitored and grown. This is notably different from taking classes on geography or biology fieldtrips, which might occur at best once or twice per year, in that it becomes a regular feature of their school week – with at least one if not two lessons per week taking place out of doors.

Open air classrooms can be cheap to maintain, and for some schools would require little from the school management and teaching staff other than commitment to timetabling classes outdoors and imagination. After the constrained conditions of many modern classrooms where sometimes students have to sit for long hours without fresh air or much movement, being in the outdoor space can be extremely liberating for their imaginations and healthy for their bodies. Schools which have no space for play in a field or yard can resort to roof gardens or safe terrace space.

(6) KIDNAPPED

In the past three years, members of staff from across the different departments, students in the lower secondary classes and as a coordinator, the school library, have been involved in several major cross-curricular projects. Kidnapped is a library-based project centring on an adventure novel of that name by Robert Louis Stevenson and fitting in with a city-wide Edinburgh educational initiative 'City of Literature'. Pupils explored history, literature and drama and performed for other members of the school community. This was then showcased by the school. Rapid Response involved teams of six students drawn from across year groups acting together to imagine and respond to a local disaster scenario.

Teachers of different subjects incorporate the work of the project into their lessons in a holistic and embedded manner so that resources and time are used in an exemplary manner. But more importantly, they use the resources at hand both in terms of the school's environment and in terms of the children's skills to build towards a collaborative conclusion which does not involve formal examinations or assessment but does note the incremental increase in a variety of students' skills, knowledge, understanding and confidence.

CONCLUSION

Across the world, information technology is dramatically altering the way students; faculty and staff learn and work. Internet-ready phones, handheld computers, digital cameras, and MP3 players are revolutionizing the college life. As the demand for technology continues to rise, colleges and universities are moving all sorts of student services, from laundry monitoring to snack delivery online. The tablet technology allows professors to make notes on charts and spreadsheets and send them directly to their students' PCs and get a feedback from each student. From the above, It can be made out that the Information and communication technology has made many innovations in the field of teaching and also made a drastic change from the old paradigm of teaching and learning. In the new paradigm of learning, the role of student is more important than teachers. The concept of paperless and penless classroom are emerging as an alternative to the old teaching learning method. Nowadays there is democratization of knowledge an the role of the teacher is changing to that of facilitator. We need to have interactive teaching and this changing role of education is inevitable with the introduction of

multimedia technology and the spawning of a technologically-savvy generation of youths.

The vision of creativity emerging from these good practices is collaborative and individual, distinctly linked to cross-curricular practices but nevertheless embedded in the skills of specific subjects and disciplines. In the projects discussed, creativity is seen as needing a careful rethink of time-tabling and schedules to leave spaces for play, discussion, experimentation and flow. These processes, in turn, need to be valued as much, if not more as lifelong-learning tools than the end 'products' of creativity within the classrooms. This, in itself, suggests that the teachers, librarians, scientists and authors involved in the best practices see creativity both as something that arises from everyday life and as something which enhances and increases the outcomes of learning.

SUGGESTIONS

The analysis reveals some of the suggestions that the teaching community can practice in the classrooms. Ultimately the teaching people are satisfied when he could reach the students community with his ideas and views. So, teaching depends upon successful mode of communication and Innovation though we mean the changes that we propose to be included in our medium of communication or even inclusion of some other elements in communicating information. The researchers recommend that the teaching would be highly effective if the teacher start to use the recent multimedia technologies like usage of computers extensively or some modifications in the conventional mode of teaching.

The use of computers may be very well practiced in the environment where the use of such technology is highly possible, but there must be some sort of innovation which can also be practiced in an environment where such use of technology is on its way to growth. In those environments use of humor, role playing, words –words approach, Z-A approach are the ideas that can very well be practiced. The researchers believe that the core objective of teaching is passing on the information or knowledge to the minds of the students. Any method using computers or modifying the existing conventional chalk-talk method are innovative if they ultimately serve the attainment of core objective of teaching.

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