

## RESTRUCTURING THE FUTURE CLASSROOM - A GLOBAL PERSPECTIVE

By

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### ABSTRACT

*The students are the consumers as well as co-creators of knowledge. Information does not flow top-down any more. Networks, peers and student's inquisitiveness teach students. Teachers act as filters. Collaboration is the key. In today's world or the netgen, knowingly or unknowingly technology and the free flow of information via internet has made young mind wanting. Over the last few decades, everything has changed in our lives with the all pervasive intervention of technology. However classrooms have remained untouched by technology. The classrooms that our grandparents went to are exactly the kind of classrooms our children study in. Chalk and blackboard, a packed classroom, text books, regimented curriculum, a teacher painstakingly explaining abstract concepts with the limited tools at her disposal. Its difficult to a Science teacher explaining how a DNA replicates, a History teacher teaching a class about the Harappan Civilization, or a Geography teacher teaching how Block mountains are formed.*

*Keywords: Pedagogy, Elmos, Blended learning*

### INTRODUCTION

The best of teachers take pains to explain the concepts largely depending on their own abilities. The students listen to the teachers, try to decipher the figures drawn on the blackboard and read from their textbooks, take notes and try hard to visualize how it happens and remember. At the end of the class, the teacher asks a few random questions to assess how the class fared. Invariably a few hands (mostly of the same set of brightest students in class), go up, the answers are given and the class ends. Shviley Brice Health(1986), "Children learn how to recognize, anticipate, tell, read and respond to narratives as part of their initial language, socialization at home and in their primary communities."

### Curriculum

Our curriculum is a rich resource for global perspectives. Courses like Peace Studies, Current Affairs and History encourage a global perspective by design. There are some areas of our curriculum that transcend language, such as the arts and athletics. In the future, we will add curricular opportunities for our students, from world languages to Economics, because our curricular choices help to shape the perspectives of our students. In addition

to the work that we are doing within our walls, we are making an ongoing commitment to International trips. This emphasis on the global perspectives means that prospective students will recognize the value of an international perspective. Its central purpose is not to educate students about the world, but rather than to shape the values, attitudes and behavior of young people. Therefore, global perspective means respecting differences of viewpoint and culture, rather than evaluating and challenging them.

### Pedagogy

In today's dynamic classroom, the teaching and learning process is becoming more nuanced and seamless. So first the future teachers need to become reflective practitioners. Reflective teachers apply observational, empirical and analytical skills to monitor revise their own teaching practices. In short future teacher need met cognitive strategies to gain awareness, not only of their own knowledge and skills in the classroom but also with the efficacy of their activities or student's learning. Second, future Teachers must gain cultural competence, that is, the ability to function comfortably in cross-cultures that differ from their own. Third, our future teachers need to become

effective cross-cultural communicators. It helps teachers to create a classroom environment that encourages good interpersonal relationships and it requires an understanding of the interrelationship between language and cultural meaning. Language is a function of culture; it reflects the conventions and values of its speakers. Future teachers need to recognise the cultural roots of cognition and its close link to language.

## **Education in the Twenty First Century**

### ***Collaborating***

Sharing information and connecting with others - Whether we know them personally or not - has proven to be a powerful tool in education. Students shared collaborating with each other through social media to learn more about specific subjects, to test out ideas and theories, to learn the facts and to gauge each other's opinion. Education is also using social media to connect with each other, share ideas and find the best teaching tools and pro? Sites like classroom 20, teacher Tibe, PBS Teachers, Edmodo and Countless others are lit up with teachers sharing success stories, asking for advice, and providing support. Collaboration is happening offline, too, at schools where educators team - teach and organize professional learning networks.

### ***Blended Learning***

Blended learning is combining computers with traditional teaching. Knowing that today's learners are wired at all times, teachers are directing students natural online proactively towards schoolwork. It's referred to as in different things-reverse teaching, flip teaching, backward classroom or reverse instruction But it all means the same thing students can conduct research, watch videos, participate in collaborative online discussions, and so at home and at school. teachers use this technique in different ways. Some assign interactive quizzes and online collaborative projects at home, Some assign watching videos and lectures at home.

### ***Global Education***

Global Education seeks to prepare students to live in an increasingly globalised and interconnected world and to be active participating citizens who make informed

decisions and contribute to shaping a better future. Global Education teachers and students develop knowledge, skills and attitudes enabling them to analyze issues with a global perspective. It also enables students to reflect on their own world and be more critical of assumption about patterns of behavior and to take responsibility for their action and participate in solution to problems in their world. There are many ways that we work to engender an international perspective in our students. It all starts in the classroom. Walter Parker, writing a chapter titled "Diversity, Globalization and Democratic Education: Curriculum Possibilities" in James Banks' Diversity and citizenship education: Global perspectives (2004), defines globalization as "worldwide political and economic restructuring and a new geographic fluidity such that human organizations at new scales, both sub national and supernatural, are now proliferating" (p.441). One of The great benefits of being at a school with an international population is the opportunity to learn from other cultures. We are doing a lot of thinking about how to draw the perspectives of all of our students into our teaching practices.

### ***Shaping Minds With Puzzle***

From a very early age children are fascinated with puzzles. Put a puzzle on the classroom table and students will gravitate to it. These puzzles are designed to teach a specific learning objective. In our rapidly changing society, an urgent need exists for schools to address and infuse global awareness into curriculum instruction. Students are increasingly confronted with many issues that require a global education focus. Kirkwood (2001), "These students will face a new world order thereby creating a need to acquire a global education."

### ***Lifelong Training in Music***

It's known that learning to play musical instruments makes children smart and intelligent. Lifelong musical training, according to the researchers, appears to confer advantage in at least two important functions known to decline with age-memory and the ability to hear speech in noise. Doctor Kraus said, "The experience of extracting meaningful sounds from a complex sounds cape and of remembering sound sequence enhances the development of auditory skills".

## ICT

Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums. In the past few decades, information and communication technologies have provided society with a vast array of new communication capabilities. For example, people can communicate in time with others in different countries using technologies such as instant messaging, voice over IP (VoIP), and video-conferencing. Social networking websites like Facebook allow users from all over the world to remain in contact and communicate on a regular basis. The term Information and Communication Technology (ICT) was introduced in England and Wales to define a set of tools used to process and communicate information. Kennewell, Steve, Parkinson, John and Tanner, Howard (2003),

Modern information and communication technologies have created a "global village," in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in the context of how modern communication technologies affect society.

### *ICT in Education*

The main purpose of ICT in education means implementing of ICT equipment and tools in teaching and learning process as a medium and methodology. The purpose of ICT in education is generally to familiarize students with the use and workings of computers, and related social and ethical issues. Dr.D.Hassan (2012). ICT has also enabled learning through multiple intelligence as CT has introduced learning through simulation ames; this enables active learning through all senses.

ICT in education can be broadly categorized in the following ways as

- ICT as a subject (i.e., computer studies)
- ICT as a tool to support traditional subjects (i.e., computer-based learning, presentation, research)

- ICT as an administrative tool (i.e., education management information systems/EMIS)
- ICT as a medium of knowledge exchange

In India, ICT is being emerging field of researches in education. In the field of Open and Distance Education it is being widely used. The Program aims to prepare students to either pursue a professional career immediately after graduation or to continue with postgraduate studies either in India or abroad. In his book *Teaching and Learning Materials and the Internet* (1996), Ian Forsyth points out that this ideological paradigm shift has been matched by a rise in the use of computers and the Internet as teaching devices and, in fact, the one upholds and allows the facilitation of the other: "This shift means that the process of education which could be described as teachers telling is (or must) change to process of teachers facilitating access to information for the learner. This shift places a greater emphasis on the learner, who is expected to take control of their learning" (Forsyth, 1996: 16). Of course, information and communication technologies do not only affect the ways that we teach. The Internet has not only affected the way that we store things like books and journals, but it has come to alter the way that students access them, search through them and, eventually, absorb or reject them.

### **ICT And The Ways We View The Future of the School**

The prevalence of home computers and Internet connections suggest that the home could replace the school as the place of learning. However, as Hakim, Ryan and Stull (2000) state, this fear misses the essential point of both the Internet as a learning resource and the school's place in (or around) it: "With new information technology, education is fast becoming free of time and space. But every learner still needs to be connected to a scaffold of support for lifelong learning achievement. Students need parents, friends, and supervisors who are also teachers and coaches. The primary function of the school-to-work movement is to mobilize understanding and support so that students will acquire the skills, habits, values, and understandings essential to productivity in all the roles of life" (Hakim, Ryan and Stull, 2000: 263). The use of technology can enhance the learning process making topics easier to cover, and aiding students in digesting

complex information. Technology can reduce the time spent trying to convey details, making larger points easier. Also, more and more traditional careers require more extensive use of technology, and exposure to technology helps prepare students for this reality. The following are some ways to enhance the classroom experience using technology.

## Computers

Computers are among the easiest way to implement technology in the classroom. In addition to displaying lesson related information, and allowing for the searching of information, computers can help organize students. Further, computers can display class related materials in several formats, which make it easier for students to view critical concepts.

## Projectors

Projectors have been a staple of education for some time, however modern projectors are at least as important and useful as computers. Modern projectors can show slides, and transparencies as well as interface with computers. This enables teaching professionals to draw from an array of multimedia sources in planning lessons.

## ELMOS (Electronic Visual Evidence Presenter)(Projector used in legal/courthoom Presentation).

Elmos are a type of presentation system designed specifically for teachers. Elmos involve a document camera, a projector, and often an interactive whiteboard. They can also interface with other devices like a computer, or a microscope, or a keyboard. This allows a vast amount of multimedia to be presented easily, and without hanging between several devices. Elmos are a high-resolution overhead projector replacement, which enables teaching professionals to incorporate a rich array of media into their lessons.

## Smart Boards

Smart boards are interactive white boards. These typically involve a presentation system or monitor, and a writing slate enabling teachers, students, or both, to modify the information presented on the monitoring system. Because these may be multi user, and are digital,

and do not require supplies like markers or erasers, these are ideal for classroom use. Smart boards may also interface with document cameras, remotes, or computers similar to Elmos.

## Professional Development Resources

It is important for teaching professionals to keep up to date on technological possibilities in lesson preparation and use in lessons. The following resources discuss specifically how to implement Computers, Projectors, Elmos, and Smart Boards into lessons, and lesson planning.

- Teaching with Computers: An Analysis
- The Smart Board: Utilizing Smart Boards for educators
- Elmos: A Detailed Guide
- Innovations in Teaching With Computers: What Works, What Does not
- Teaching & Computers: Could Teaching Be Automated?
- Wireless Education & Technology: Integrating Broadband Technology into
- The Classroom
- Internet 2: Faster Internet for Educational Institutions

Technology is a part of today's world. In order to prepare students for the world, they need to be exposed to the latest technologies on a daily basis in classrooms. Computers, projectors, Elmos, and Smart boards are some current technologies available for classrooms. Tomorrow may bring new technologies, built off of those existing today.

## Interactive Whiteboard

In that scenario, Interactive White Board or Electronic White Board is emerging as one of the powerful pedagogical innovations in the teaching and learning process. They were originally developed for office settings and are a relatively new technology to education. The usage and application of IWB are fast catching up with the pace as a tool to enhance teaching, and as a tool to support learning. A number of themes were identified about the potential benefits of IWBs for teaching in terms of flexibility and versatility, multimedia/multimodal presentation, efficiency supporting planning and the development of

resources, modeling ICT skills, interactivity and participation in lessons.

IWBs have now become flexible and versatile teaching tool across age groups and settings, ranging from nursery, to further and higher education and even distance education. This versatility extends to the content of lessons and activities. One of the major advantages claimed with regard to IWBs as a teaching tool is that they are 'interactive'. Experts state that students are motivated in lessons with an IWB because of 'the high level of interaction – students enjoy interacting physically with the board, manipulating text and images'.

### **Educomp Smartclass**

Educomp smart class is a digital initiative pioneered and invented by Educomp and has already been adopted by over 5500 progressive schools in India. Smart class is transforming the way teachers teach and students learn in schools. It's a new age technology movement that is fast becoming an imperative for schools. Soon it will touch every class and every progressive school in India.

Educomp smart class brings about a complete transformation in classrooms. The Science teacher while explaining how a DNA replicates are able to show the class a 3D animation of the DNA replication process on a large screen. She can explain the fine points of the process, zoom in to show the relevant visuals, freeze and annotate when and where she needs to emphasize. Similarly the History teacher shows the class a virtual walk through of the Harappan Civilization. Uncovering the relevant parts step by step as a part of her lesson plan, while the Geography teacher shows a virtual Block mountain being formed all with engaging animations, colors, music, sounds and voice. The teachers gain complete attention and interest of every child in the class. Every child gets a visual input on how it happens and the concepts are well understood and internalized. Towards the end of the class, every teacher displays a set of questions on a large screen, every child in the class gets ready to answer the questions with their personal answering device – SAS. Students click the answers, instantly, teachers are able to get a score sheet for

every child in class. She ends the class re-teaching the parts of the lesson that were not understood well by class. This results in faster and accurate understanding of the concepts in class and helps improve the overall academic performance of students. Teachers are able to keep students engaged in the learning process and also get an instant and accurate assessment of learning outcomes achieved at the end of the class.

### **Educomp smart class**

- Improves teacher effectiveness and productivity in class.
- It brings abstract and difficult curriculum concepts to life inside classrooms.
- Makes learning an enjoyable experience for students.
- Improves academic performance of students.
- Enables instant formative assessment of learning outcomes in class.
- It also enables teachers to instantly assess and evaluate the learning achieved by their students in class.
- How is Educomp smart class implemented in Schools?
- Provision of digital content mapped to the school syllabus
- All hardware, equipment and accessories – installation and maintenance
- Initial and ongoing training of teachers
- Day to day support and monitoring of usage

Above all, schools do not have to worry about the funds required to set up the infrastructure to run Educomp smart class. Any school can adopt the program by entering into a contract with Educomp and pay a nominal subscription fees on a per student per month basis.

### **Conclusion**

We have looked at just some of the ways in which ICT is used in education and, through this, shapes it. A vital point arising from this paper is that information and communications technology in the pedagogical system is merely one facet of a larger paradigmatic shift that, perhaps as we have seen, began in the 1960s and 1970s with the progressive theories Paulo Freire and continued into the new millennium. The erosion of the boundary between



teacher and learner, between the school and the home, is a reflection of the erosion of boundaries commensurate with postmodernity that has been felt in virtually every social science, from sociology to politics, from economics to history. The role of the teacher, as we have seen, is increasingly concerned with imbuing the student with the skills to determine what information is suitable and what mental models to use when searching for it. Ultimately, of course, the freedom and emancipation, to use Laurillard's phrase, offered by ICT has certain responsibilities and caveats attached. As the Labour Government's manifesto of 2001 infers, the education system's attitude regarding ICT must be, perhaps, not one of a reluctant acquiescence towards change, but an imperative to change brought about by shifts in the surrounding society. As the Internet becomes more and more important in the home it needs to reflect this in the classroom.

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