APPLICATION OF TECHNOLOGIES IN CONTEXT OF SOCIAL SCIENCE & MEDIA IN FUTURE EDUCATION: PROS & CONS

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ABSTRACT

It is well said, 'Seeing is believing.' It is good that new technologies are emerging every other day that can enable the teacher, media men and the learner to see, hear, feel smell and touch things to a great extent. Learning and practicing journalism is getting easier and an enriching experience thanks to technologies. Earlier teaching social science and journalism was dry and insipid. But new emerging technologies are working wonders. However, beyond a point, using future technologies is hazardous. It is a double edged sword. Technologies are there as aids. They are capable of solving problems but at the same time they may give rise to problems. The role of trouble shooting may be swapped with trouble creation. The first letter of man and machine is m but man should be at the helm of affairs, not vice versa. Educationists and journalists find technologies useful some times, but a headache in different situations. Technologies provide learners and experts an opportunity to learn and teach in ways their prior generation never had. The learners today have quick access to answers and research. However, this access is also affecting them physically, emotionally, socially and psychologically at times. Like anything in this world the technologies have got some inherent merits and demerits. The future is the age of technologies. As applicable in every walk of life nothing can be entirely advantageous only. When technologies have got a large number of advantages, they are bound to have some disadvantages as well. The matter of fact is that the future technologies in the context of social science and media in future education are a hard reality of the day and how the future generation makes best use for mankind or puts them to misuse for the discomfort of the future generation, is to be decided by man only. It's up to educators, media men, administrators, and leaders to decide whether the good outweighs the bad or vice versa.

KEYWORDS: Technologies, Media, Future, Pros & Cons, Social Science.

FUTURE EDUCATION: SCOPE & PRECAUTION

Reasonably on the basis of the present trends some events are, however, predictable. In the backdrop of the technologies flooding the present world, 'Education must cease being

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confined within school walls and lifelong education should become the master concept for educational policies in the years to come.'[1] The future can be easily visualized on the basis of new inventions taking place. 'A scenario is a hypothetical sequence of events or an imaginative history of the future.' [2] Now-a-days things are undergoing changes at a very fast speed under the impact of science and technology. At times the teachers and media men of today play a Lilliputian role in their field. They are sometimes unable to sustain the interest of their clients. The clients prefer technologies over experts for learning. As such strategies have to be evolved afresh. It is being felt increasingly that teaching and learning should be a collaborative effort to achieve the objectives. The problem is that the modern man is not able to handle the situation properly.

Dr Radhakrishnan has aptly said, 'Without a spiritual recovery the scientific achievements threaten to destroy us. We are living in the days of destiny. Either the world will blow up in flames or settle down in peace-it depends on the seriousness with which we face the tasks of our age.'[3]There is little doubt that technologies can prove to be a very good servant provided that man has the control over them. 'The modern science and technology can be useful if they are utilized properly. At present man does not possess the wisdom to use this scientific and technological power properly.' [4]

SOCIAL SCIENCE & TECHNOLOGIES

Needless to say, while teaching geography or practicing journalism when we talk of a country which has not been seen by a learner it becomes difficult to teach and learn just using the lecture method. On the contrary if we can go live to that country applying technologies, this experience will be a lifelong treasure and no extra effort will be required to learn. Similarly when we talk of the medieval age or

the Vedic era, if a slide on the relevant age could be shown without much ado, the whole problem of explaining theoretical aspect painstakingly will be sorted out

'All education springs from images of the future and all education creates images of the future. If the image of the future held by society is grossly inaccurate, its education system will betray its youth.'[5]At present revolutionary changes are occurring and it is very difficult to cope up with these changes. 'New scientific inventions and discoveries like cloning process , test tube baby, renting of wombs etc. create unimaginable complications and strange unprecedented problems in society for which we are not prepared.' [6] In the context of the developing and the developed countries also response is bound to be different. Advanced citizens are likely to prove a threat to some not so developed citizens of tomorrow. 'The citizens of today are claiming rights over the citizens of tomorrow, threatening their well being and at times their lives.' [7]

SOCIAL & EDUCATIONAL IMPLICATIONS & CHANGES

It also sociologically refers to the teachers, journalists, learners, materials, content and so on. The emerging trends with regard to social science and media hint at the changing complexion of the traditional field. The working field may not have traditional aids and the experts may not use the conservative aids. The concept of the traditional institution may altogether disappear. There will be a paradigm shift from experts to learners. Working field and institutions will be remodeled. 'Other applications of nanotechnology would supposedly make our cities obsolete as floating microscopic robots with lots of arms and hooks sticking out from all angles would compose a system that could turn itself into ancient Rome one day and the Emerald city the next.'[8] Any one will be at liberty to step in such institutions

and benefit from them to the utmost extent of his potential. The institutions may not be rigid on what has to be taught to learners rather it may be other way around of what the learner wants to learn. There will be maximum use of science and technology to make the learning experience very interesting and enriching. The institutions will be ICT focused and the latest gadgets will be used to deliver the content. There will be hardly any restrictions on the learner to be compulsory present in the traditional building and the administrative machinery is likely to be different from what it is today.

Like in any field the changes are likely to be in the following manner: 'The future in software is programs which promise to adapt themselves to their users' personality and work habits so that the term personal computer will take on an entirely new meaning.'[9]

Technologies change at a very fast pace by its own nature and as such, making them accessible to learners, experts and other stakeholders is a difficult task. They play a very significant role in dissemination of information, thus spreading education. 'Because of the advancement of the technology the world will shrink and its size will become more small.'[10]

These technologies will change the life style and the routine of the man 'Each individual will have a private, pocket size, two way television instrument and immediate personal access to a computer serving as his news source. It will be his personal communicator with the world at large, with his bank, his broker, government agents, shopping services and so on.'[11]But we have to be conscious of the fact that merely getting a cutting edge technologies cannot provide us true freedom and happiness.' This makes it appropriately clear that merely possessing technologies cannot solve all the problems ' Man has conquered the ocean and the air and has tamed the beasts of the forests

but he will never know true freedom and happiness until he has tamed himself'.[12]

Throwing light on the concept of the future scenarios in classroom teaching, Mat adds, 'The future is about access, anywhere learning and collaboration, both locally and globally. Teaching and learning is going to be social. Schools of the future could have a traditional cohort of students, as well as online only students who live across the country or even the world. Things are already starting to move this way with the emergence of massive open online courses (MOOCs).For me the future of technology in education is the cloud.'[13]

SOME CUTTING EDGE TECHNOLOGIES

They are emerging every other and they are likely to give a new shape to the future education. It is expected that the whole education structure on the whole will get a new face lift. To begin with, some of the future technologies are as follows:

3D PRINTING

A 3D printer may be helpful for the teachers, media men and the learners. In some subjects, it is a must and the institutions must have it at any cost. Instead of being restricted to what they can play with, learners in the institutions of the future can print out 3D models for various purposes, including show-and-tell. The teachers and the learners of the faculty like history, geography, political science, economics, journalism and science could immensely benefit from 3D printing technology. Some global institutions have already commenced making use of 3D printer learners to create design prototypes for the students of engineering.

The 3D printer comes handy to produce working mini-models to test out engineering design principles. The students can then strive to achieve perfection in their design before

making an actual prototype. Together with CAD (computer-aided design) modeling software, 3D printing can enable the students to experiment freely with their designs without spending too much and wasting too much time.

In some subjects like social science, journalism and science the teachers, media men and the learner need the visuals to increase learning and the reducing cost of 3D printers means that more teachers will be in a position to reconstruct complex concept models to teach theoretical concepts. To cite, 'the concept of molecular structures and configurations may be difficult to understand, but by printing out physical versions of these structures, students will be facilitated to put a form on abstract thought'[14]

CLOUD COMPUTING

It is significant to note that learners can learn independently through this. There is also a massive amount of resources online that learners can find and use themselves, without the assistance of the teacher. This certainly means the role of the expert will change 'Teachers can use the cloud to set, collect and grade work online. Students will have instant access to grades, comments and work via a computer, smartphone or tablet.

Many schools are already doing this. Plus, services such as the educational social network Edmodo offer this for free. This is where devices come in. All devices, not matter, which ones we will use in the future will need to access the cloud.

Each student will have their own. Either a device specified by the school or one they have chosen to bring in themselves.'[15] These days cloud computing is a buzz word and will most probably continue to change many aspects of education and journalism. The city of Zhuji in Zhejiang has installed more than 6,000 cloud

computing terminal devices in 118 schools in order to introduce modern education in China.

The learners of future class rooms may just require an electronic device to access all their work and all other learning resources in the Cloud. This means that the learners need not carry heavy textbooks to educational institutions. At the same time the learners have a constant access to their reading materials as long as there is an Internet connection. Such convenience, when provided to learners will put them at liberty to work on their projects or homework anytime and anywhere. The digital library is a great source of help to media men as well as educationists as it is accessible even when the campus library is not so.

The digital library will also help learners to skip hitching a ride there, or to the bookstore or even to class. Surely, this will save time and money of the students and others. 'Cloud computing aims at virtualizing the classroom. Educational institutions can now leverage on cloud technology and set up online learning platforms for students to log on and attend classes in a virtual environment'[16].

To cite, the concept of cloud-based virtual learning environment (VLE), lets learners and media men access learning content and participate in discussions in forums. Home Assignments or even tests can also be easily distributed among the learners, minimizing the need for them to be physically present, but to encourage interaction and discussions, educators and experts require another channel.

ONLINE SOCIAL NETWORKING

A noteworthy number of institutions have already got themselves registered with the online virtual world. 'It is a feature of the second Life to provide students with an online platform to socialize with each other.'[17] Such social networks enable learners and the media

men to share their ideas freely, while experts moderate as a big part of the cloud platform. This notion is very empowering because it will imbue learners with a new perception-that learning is a subjective responsibility and not that of the teacher's and expert's.

Besides, this interactive learning where ideas are at full play will let the ideas flow freely and thus the learning will be more aligned with real-world scenarios where collaboration is normally the norm. Social networking tools can be made use to enhance collaboration and team-building initiatives in political science, economics, journalism to mention a few.

However, when there is a need, experts can render some guidance through responses to queries or by uploading useful information to the cloud community as early as possible. Another merit is that it also serves as a great feedback tool, to help improve the courseware. A social-based approach to education will seem more than relevant to students of the future.

BIOMETRICS: EYE TRACKING

One technology that's been gaining recognition is biometrics. Conventionally biometrics is associated with the security industry, as it uses what is unique to each one of us to authenticate our identity: fingerprints, facial recognition, iris patterns, and voice. In terms of education, some schools are only using fingerprinting to prevent truancy and for borrowing books from their school library.

However, eye-tracking can be helpful, for instance, in providing invaluable feedback for teachers and journalists to understand how learners and clients absorb and understand the learning content. As a matter of fact, advertising research has been using eye-tracking technology to see how consumers respond to their advertisements and to determine what captures their attention. 'In the future, this technology will help intelligent

software completely understand the physical and emotional state of children learning in the classroom.

Course material presented to learners can be altered on the fly and will be perfectly tailored to individual needs based on biometric signals from students'[18]

Similarly the same form of analysis can be made to ascertain course effectiveness or individual learning styles. Mirametrix is using its S2 Eye Tracker to assess how students learn by getting details of where they look during online learning sessions.

TOUCHLESS TECHNOLOGY

The data may then be linked with interactive adaptive learning systems in a manner that adjusts the content to best suit each student's and client's learning style. Alternatively, the eye movement patterns may also guide the delivery of the content, taking into account concepts students might have trouble understanding evident in the longer time they spend gazing at that particular section.

Multi-Touch LCD Screens

Over the past few decades, we've seen the transition from blackboard to whiteboard, to overhead projector and to video projector for computers in schools.

Instead of the traditional big board in the institutions, it will probably be just like the Samsung SUR40 for Microsoft Surface, a giant tablet with its LCD screen lying flat atop a table-like structure. Students and media trainees will sit around the table tablet, swipe on the board to manipulate and drag images around the screen, or type notes with their onscreen keyboards.

'Along with the social networking feature, these multi-touch surfaces will also allow students to

collaborate live with peers around the world by manipulating virtual objects in real-time. The Multi-touch project by Synergy Net in Durham University is a great existing example of how such technology can be used by school children.'[19]

GAME-BASED LEARNING

Growing up at a time when the world is linked by the internet, children and clients today appear to have very short attention spans. This is unsurprising, since their childhood moves around YouTube, Facebook and smartphones that provide them with on-the-go 24-hours updates and the answers to all their queries through Google and Wikipedia. 'To cater to such a fast-paced generation, schools will eventually abandon traditional teaching methods of rote learning to align themselves with the times. One great way to achieve that is to use what had always been considered as a major distraction to learning-video games'[20].

KinectEDucation provides a one-stop online community for interested educators and clients who want to use Microsoft Kinect for learning purposes. In Gamestar Mechanic, the idea is to impart students with basic game designing skills (without the complexity of programming) to create their own games and consequently help them develop broad skill sets such as language, systematic thinking, problem-solving (through simulation, trial-and-errors, etc), storytelling, art and many more.

AUGMENTED REALITY (AR)

It is emerging as the latest technology and it will reshape the whole world of education and media with the introduction of Google Glass, gaming and awesome apps for astronomy. This enables learners and clients to see additional information layered over what they see through the lens. At present access to AR technology for educational and media purposes

is however, generally confined to smart phones. Apps such as Sky Map enable the teachers, media men and the learners scout the night sky for constellations. They are, however, not fully integrated as a component of education and media as they have yet to reach the stage of seamlessness.

The AR experience has to be such to mix information readily with the reality for the educational and media purpose and that day may not be too far away .Learners may find out the world without having to hold up a device which could distract from the experience with Google Glass and the other AR-enabled wearable devices that are to be used in the sphere of education the days to come.

Virtual field trips can be possible with AR. A physics teacher taught from inside the Large Hadron Collider in Switzerland, streaming what he 'sees through a beta Google Glass to his students thousands of miles away. They see him, and he sees them; it's as if they are in the same classroom!

The "Hangout" feature in use here is particularly promising for media men and educationists for team collaborations in projects and assignments'. This technology is very important for the students of tourism, history, geography, journalism etc. This will make learners and clients able to see supplementary and interactive information appearing on historical artifacts and geographical for them to get to know more about its history.

FLEXIBLE DISPLAYS & PAPER THIN SMART PHONES

Note-taking on memo pads is still quite common during lectures although there may be a shift from paper to laptops, net books or tablets. As educational settings become more digitalized, the future classroom will reconcile

the differences between pen and paper versus keyboard and screen. The reply might just be flexible OLED-based displays. 'Just like regular paper, these displays will be lightweight, flexible and extremely thin. This means we can roll them up into tubes or fold them like newspapers.'[21] Different from regular paper however, these plastic e-papers are not only durable, but also has the feature of interactivity. With swipes, taps and pinching (maybe), these flexible paper-thin displays can take over paper-centric industries.

TECHNOLOGIES: PROS & CONS

Technologies are good servants but bad masters. As good servants they have got the following services to offer:

EXPERIMENTATION IN TEACHING

As an academician and media men, it is easy to effectively design and execute a class guided with technology. Whether it's a dramatic change such as teaching with a flipped-classroom, or just adopting a single tool for a specific project or term, educationists can make experiments using the latest technologies in future.

LEARNING FULL OF FUN & MORE EFFECTIVE

From apps to organizational platforms to e-textbooks and more, there are many amazing tools that can help the user. Tools are helpful to both students, trainees and experts to collaborate, share ideas, stay organized, and more to get the most out of learning.

BORING WORK AUTOMATED

There are engagement tools that can automate grading for the user and keep track of student's and trainee's performance. Similarly, tools can help you streamline grading for writing assignments, reports, discussions, and participation, and answering common student questions, which otherwise can seem daunting due to their objective nature.

SUPPLEMENTING LEARNING EXPERIENCE

It shifts the classroom experience from the verbal approach to a more collaborative environment. It has a wide range of experience from research to inviting remote speakers virtually and beyond.

LIFE SKILLS THROUGH TECHNOLOGY

Creating presentations, learning to differentiate reliable from unreliable sources on the Internet, maintaining proper online etiquette, and writing emails; these are all vital skills that trainees can learn in the institution and have command before higher education.

BENEFIT OF DIGITAL WORLD

Using technology in the institution prepares students and media trainees for a future deeply rooted in technology. It is not affordable to deprive the benefits of the digital world. This is possible at the cost of being left lagging behind

TIMELY & EASILY AVAILABLE INFORMATION

Technologies are enabling teachers to know where students and trainees are missing particular pieces of understanding and they can focus on the missing part of the learners. Instead of sitting through hour-long lectures of material they've mostly learned, technologies are enabling them to learn what they need, when they need it.

PERSONAL CONVENIENCE

Apps enable learners to make progress at their own pace. Many of apps are adaptive. It means that questions and problems will get easier or more difficulty, depending on learners' performance. Technologies can be upgraded to meet learners at their precise learning levels.

Besides, a wide range of technologies available imply that learners in the same institutions might be using different systems to learn similar material.

MULTI LEARNING MODALITIES

Incorporating technologies into the educational institutions implies that learners have exposure and access to multi ways of learning. It is practically possible that some learners do thrive in a lecture environment while others might be great independent learners, who can collect information from educational software. Providing learners the opportunity of different ways to learn means they are at liberty to explore and try different techniques. In the end, they can learn the best strategies for themselves as individual students.

HELPFUL IN MEETING SPECIAL NEEDS

Technologies make it possible for learners with special needs to thrive in academic settings. From adaptive word processor apps to programs that speak for learners who struggle with language, technologies enable learners to communicate and thus help them in getting involved with their experts and learners.

EASY DATA COLLECTION & DISTRIBUTION

Apps and platforms enable experts to integrate all the information they might need to know about a learner, for example, attendance record, performance on quizzes, performance in English language, activities in special education. With this requisite information, experts can easily find out how their learners are performing as a whole class, as a subgroup, and as individuals.

AS A BAD MASTER THEY HAVE GOT THE FOLLOWING DEMERITS

EMERGING AS CHALLENGE

Technologies are emerging as a way to replace teachers and journalists in the future. It is not a misplaced concern. For example, the sectors such as the auto industry, agriculture, and manufacturing industries have all mechanized many parts of their process and the retrenchment of workers is quite common. Some people rightly think that teachers and media men like a sole editor will become obsolete, as the latest developments in the technologies are powerful enough to deliver content, evaluate them.

CAUSE OF DISTRACTION

This creates this hallucination that you have the technologies at hand but the matter of fact is that a number of technologies are yet to be available. Creating expectations and guidelines for the learners and sticking to them is important. It is better to use technology that learners already have (smart phones, laptops, etc.) for good and valuable learning experiences, rather than pretend like those devices aren't present in your institution.

DISCONNECT OF SOCIAL INTERACTION

The use of technologies will affect learners' ability to verbally communicate. If assignments in institutions are created in which both technological tools as well as oral presentations and collaboration are used, this can teach learners to be dynamic in learning and interacting with others.

MALPRACTICES

The technology encourages to giving objective assignments that eliminates the role of subjectivity. Consequently the learners can feel encouraged to resort to malpractices like mass copying or fabricating a story and doing some task in a very mechanical manner.

UNEQUAL ACCESS

There will be learners who do not have the means of technologies at the same level. Sometimes the devices are with the learners

but then the quality of sources may not be top-notch. Disparities in resources can lead to different outcomes.

MORE LABOR INTENSIVE

Using technologies can require more labour on the part of the user to adapt in the classroom. In many ways though, using technology can become as natural to you as any daily activity. Everybody cannot be equally expert in using the technology.

WASTAGE OF TIME ETC

Learners are and likely to get busier in tweeting and Snap chatting thus paying scant regard to academics or journalism. The learners' innate curiosity, coupled with their tech savvy could lead to more online socializing in environments where devices are easily available.

PLAGIARISM

Plagiarism has been adversely affecting teachers and journalists earlier too. The latest technologies enable learners to easily access essays, reports, class notes, tests, etc. online, making it difficult for experts to know if the work their learners have got is original or copied from any source. There is some soft ware to detect plagiarism but no system can be perfect.

AVAILABILITY

All the learners have the means of technologies available outside of the institution to the same extent despite the library or the institution being an option. Using technology in the institutions is fine but all learners may not have access to the devices at the equal footing. This will further cause disparities.

CONFIDENTIALITY

The latest gadgets, apps and technologies have come a long way in exposing everything to the public domain. This can pose a threat to the individuality of learners.

In view of the above one thing can be safely said 'Task of today as well as of tomorrow is to help the individual to know himself as Socrates wanted centuries ago.'[22] One thing should be borne in mind that technologies should follow man and not vice versa.

CONCLUSION

Technologies are bringing about drastic changes in education and media including social science. Some changes are welcome and some are not. Using cloud computing, online social networking, AR and adaptive learning systems utilizing eye tracking technology, learning can occur outside the conservative institutions. Innovative practices and trials are welcome as simulations are made possible through 3D printing and game-based learning without really incurring real-world consequences or costs. Due to rapid changes in science and technology much of knowledge and skills considered to be useful in a traditional society will become useless and irrelevant. At present man does not have the requisite wisdom to utilize the power of science and technology. Consequently certain crises are bound to erupt due to selfishness, shortsightedness and lust for power.

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