VIRTUAL CLASSROOM: THE FUTURE OF DIGITAL GENERATION

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ABSTRACT

Development of Information communication technologies broke the four wall of schools in which students' learn. Now, there are several mediums & resource emerged based on technology for education. In modern days, diversifying technology is at the top. The digitization is the exact solution for simplicity of learning methods. Great things are promised by technology with it also to transform how people collaborate and communicate with each other. The virtual technologies in classroom enabled the students and teachers to collaborate in learning process without any restriction. Now most of the learners in schools are digital generation and surrounded by the various electronic gadgets which enable them to interact, participate collaborate and cooperate with others. Teaching of this generation is not an easy task. This article explores this theme and discusses about the virtual classroom and its characteristics.

Keywords: Information and Communication Technology, Digitization

Introduction

"Education" is a mean to drawing out the best innate abilities of learners or development of the faculties that commence in school and college; but it does not end there. There are various techniques and approaches to bring out these changes and technology is one of them. Education and technology are interconnected. This synergy is able to transform the world we live in. The contradictory phenomenon is that while being an early adopter of technology, education is also one of the last sectors to be fully transformed by it, due to institutional inertia and a number of other reasons (Abrosimova, 2007). The interconnection of Education and Technology developed

an environment in which learner always eager to cooperate to others in decision-making, information sharing, collaboration, and innovation. This type of the generation is often called 'digital natives' (Prensky, 2001) and teaching of this generation is a big challenge for the teachers because most of the teachers are not fully capable to use digital technology. Labbas & shaban(2013) argued that teachers' fear of change is not connected to digital tools only, but also that teachers are worried about the neurological, social, and psychological effects of students' overuse of technology. While some teachers till date is not able to recognise this area as a digital area which is much differing from the old one.

Digital Generation

The digitalisation of society started by1980 and ride on tide wave after 1990 while after 2000 the entire face of world changed due to this digitalisation process. The generation born before 1080 is called generation X or digital immigration and this generation representation is as teachers in education community, The generation born after 1980 but before 1995 is called generation Y or Digital native and this generation is either students or teacher at this time, whereas the generation born after 1995 is called *generation Z or net generation is purely student at this time*. The *digital natives* are peoples who started their education with digital devices while the *net generation* are those children who surrounded by the digital devices from the time of their birth. But, there are a large number of peoples born before 80 but are well versed in utilising various digital resources at the same time a lots of peoples born after 1980 are not able to use these technologies or naive in digital field. Thus the gap between the two groups has nothing to do with birth, but with how the two generations think (Feeney, 2010). Therefore most suitable words for both two groups are *digital native* and *digital immigrants.* Mostly digital natives are surrounded by the various digital devices and they do more than one works(multitasking) at a time, thus their mind think various thoughts parallel. Brief differences between digital native and digital alien are given here;

Table-1. Difference between different generations

Characteristics of Digital Natives	Characteristics of Digital immigrants
Net Generation	Print generation
Multitasked	Single tasked
Parallel thinking	Straight thinking
Expert in multimedia utilisation	Naive in multimedia

Multiple resources	Limited resource
Socialised on internet(social networking sites)	Socialised in cafeteria, tea stall, restaurant etc.
Chatting, short messaging(sms), online games, simulation	News, current affair, reading ,holidays

As above difference shows that the digital natives are multitasked so they are always in hurry to accomplish their works/tasks and use multi resources. Prensky (2001) described the digital natives are born surrounded by digital media; thus, their brains might function differently. He describes their digital natives' practices as follows:

> *Digital Natives are used to receiving information really fast. They like to parallel process and multi-task. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to "serious" work.*

Teaching of this generation is a serious challenge in front of teachers because most of the teachers come from the previous generation and somehow lagging behind in digital skill with this generation.

Virtual classroom

The development and innovations in digital technology is changing the classroom environment and now students are coming in classroom with digital literacy. This generation cannot be taught with old traditional teaching methods and techniques. Therefore a new teaching learning environment is needed in classrooms by which this generation can excel their capabilities in positive direction (table-2).

Table-2 Classroom for digital natives and digital immigrants

S.No.	Classroom for digital immigrants	Classroom for digital natives
1	Traditional teaching with chalk and talk	Transform the pedagogy based on development of new digital technology
2	Books as teaching resource for teachers	Children as active and independent learners
3	Same instruction for whole class	Collaboration and cooperation among students and teacher
4	Teacher led classroom	Student-led classroom with fusion of digital technology and guided by teacher

5	Lectures and discussion, presentation as teaching methods	A creative and innovative learning environment where teachers and pupils learn together
6	Teachers are class leader or director, lecturer, discussion leader	Teachers are instructional designer; trainer; collaborator; team coordinator; advisor; and monitoring and assessment specialist
7	Students are Knowledge receiver	Students are self- learner, team member, and knowledge manager

In most of developing countries the learning culture of classroom is still based on digital immigrants due to the various reasons. Teachers play dominant role and behave like a main source of information while students behave like mere passive listener and knowledge receiver. In Digital native's classroom, the students and teachers both are fully aware with latest technologies specially web based and immerse in the Internet culture.

Virtual Classroom

Education hasn't changed for years in terms of teaching approaches and techniques applied. Today millennials feel pretty comfortable with online education, doing research on the Internet, resorting to instructional videos on YouTube and distance learning powered by video technology. Obviously, virtual reality is next. Some virtual reality projects used both in schools and higher educational institutions are already under way

Digitized Classrooms:

Rather than considering IT a standalone tool or skill, digitization tends to disperse throughout every facet of the classroom. *Examples: tablets, electronic screens, interactive whiteboards, data projectors,*

In short the digitized classroom mean by

1. Use of projector with tablet

2. Using less paper

3. Use of digital resources and digital tools

4. Development of digital ethics and honor online, and respect for fair use for education 5. Teacher-collected or teacher-created resources

6. Inquiry, Project & Problem-Based Learning

7. Student work is published for a wider audience
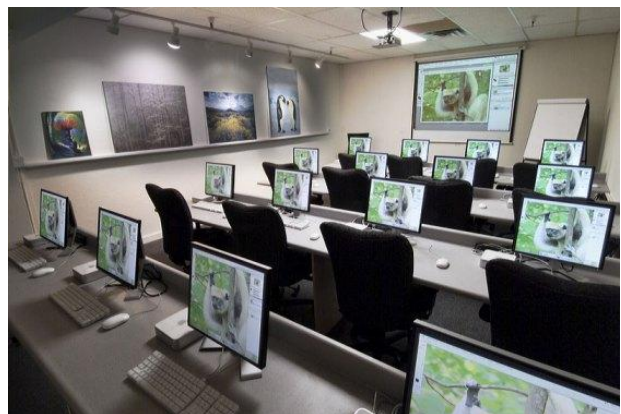
8. Digital Literacy and Multimedia

The three important reasons to consider a Digital Classroom is Easier Access, Better Information and Evolving Solution

Gamification:

The concept of meaningful gamification is that the primary use of game layers is not to provide external rewards, but rather to help participants find a deeper connection to the underlying topic. This is done through game elements that focus on concepts of play, that provide information and choice, and that encourage reflection (Nicholson, 2013). Gamification of learning environment brings instant feedback to acquired knowledge through achievements and points systems. Games in any form always increase the motivation level of participants. "Motivation and engagement are key factors of game-based learning, and virtual reality takes those to the next level (Suzanne, 2013).

Students need inspiration and encouragement to keep exploring the potential of education for their own capabilities. Engagement that virtual reality can produce will eventually veer students' desire for exploration more toward intellect and away from play. Gamification in virtual reality helps learners in following ways;

1. student developed apps, educational games, educational programming tools,
2. encourage students for achievement ,
3. motivated students for self-paced learning
4. Encourage informal learning:
5. Create a digital, customizable classroom management system built on role playing themes.

Virtual/Physical Studios:

Bridging the online–offline gap, these future technologies offer a potential future

where embodiment is secondary to information access.

A virtual classroom would offer students the opportunity to learn hands-on training for emergency situations without the need for an emergency. Project collaboration would become extremely efficient as the participants could join in from any given location. The VR environment would not only enhance engagement among students, it would also allow for tasks to be undertaken that simply couldn't be conjured in reality. 3D virtual environment help and facilitate collaborative learning and training scenario. These tools provide the opportunity for teachers and students to works together as avatars as they control actual equipment, visualize physical phenomenon generated by experiment, and discuss the result (Seheucher, et.,al., 2009).

Disintermediation:

Disintermediation refers the removal of intermediaries or middle man between two parties. In educational environment the two parties are teachers and students, while the schools are intermediaries. But the emergence of virtual reality enabled the teachers to reach up to the unreached. Now a teacher can teach students from anywhere and anytime. This helps distance ourselves from using only the teacher-to-student education model which has worked relatively well in the past when information was harder to retrieve on an individual level but now
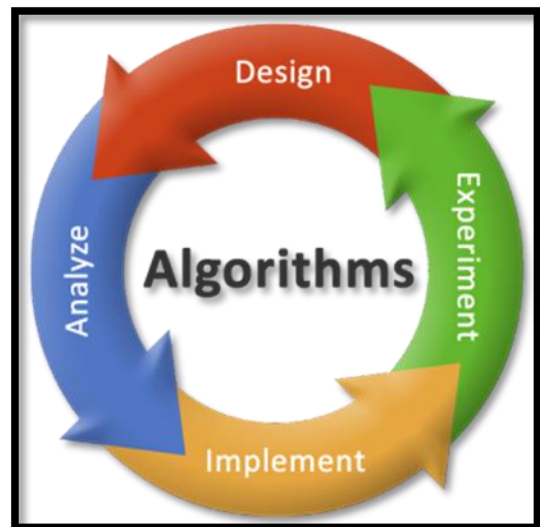
that almost all data is accessible anywhere it's about time for a change. This field focuses on using algorithms to assign tasks and assess current performance to develop better lesson plans and project models for the future. In this fashion, the teacher is free to help anyone who is struggling along the path and teach them how to follow it versus having to lay down the framework themselves. *T*elepresence, algo-generated lessons, mobile learning platforms, task-assignment algorithms, S2S teaching platforms, assessment algorithms, student-designed learning mechanics etc are some tools which help in disintermediation.

Collaboration in virtual reality classroom:

Collaboration is a situation in which two or more learners learn or try to learn something together. In another world it a social constructivist approach and heavily enrooted in Vygotsky

social learning theory. Virtual reality in classroom enhances the collaborative skill of learners. It provides opportunity to the students to shed the shyness and become a part of active learning group. The collaborative environment driven by virtual technologies enables a struggling student to become part of class group because of his technological skills.

Conclusion

In this paper we discussed about the virtual classroom and its various functions such as gamification, collaboration, digital classroom and also virtual studio or virtual laboratory. The biggest advantage of virtual classroom is reduction of the number of expensive physical infrastructures and providing the opportunity to learners to participate in classroom from remote location at any time ((Seheucher, et.,al., 2009). Gamification motivates the students to learn and participate in learning process. The use such resources in collaborative virtual environment improve the potential effect of the virtual tools by collaboration of learners and teachers and between students themselves. The digital generation has more knowledge, understanding and skills in utilization of various ICTs and its application. Therefore teaching of this generation is not a straightforward job for teachers. Teachers must prepare and enable them with latest information and skills related to the ICT field so that they feel free in a classroom filled with digital generation learners.

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