

Digital Academician - Technology, Innovation & Education

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Abstract

The determination of this paper present here is an overview of being a Digital Academician in today's world and the methods being employed, its significance, explanation and its applicability in the educational system of the present scenario. Here the author has represented towards the many digital tools and their application in the current scenario of the education. Educational Technology is composed of two words, Education & Technology, which means the usage of Technology in educational field. The belief, that with the effective and proper use of technologies in the field of education, desirable results can be achieved in teaching, learning and testing spheres. As a concept, it concerns an array of tools such as media, machines and networking hardware as well as considering underlying theoretical perspectives for their effective application. In the present study, few technological tools namely; KAHOOT, TRELLO, PREZI, NEARPOD and PEARGRADE are being critically evaluated on the basis of their performance for engaging students in the classroom, efficiency for student response, ease of use for both the teacher as well as the student and for improving the class-culture and resultant student performance, indicative of better learning and teaching strategies.

Keywords: Digital Academician, Educational Tools, Digital Education, Student Engagement

Introduction

Education (Latin Word – 'Educatum' means to train), has always been an area which comprises of other relevant spaces such as Philosophy, Psychology, Measurement and Evaluation etc. With

advent of time, the technology in form of digital intervention has become an important locus of focus and is being used to facilitate training on creative practices within different disciplines. Within performance, where work is often practice based, ephemeral, and the result of complex collaborative processes, the use of technology as a mechanism to enhance reflection has been used to good effect (Dennis, 2007; Doughty, Francksen, Huxley, & Leach, 2008). To be an effective teacher in the 21st century, teachers need to be able to engage and interact with a wide variety of information from an ever increasing range of sources. These sources may cover:

- Hardware (physical, including physical media)
- Software (can be physical, e.g. program printouts)
- Processes (non-physical)
- Procedures (non-physical)

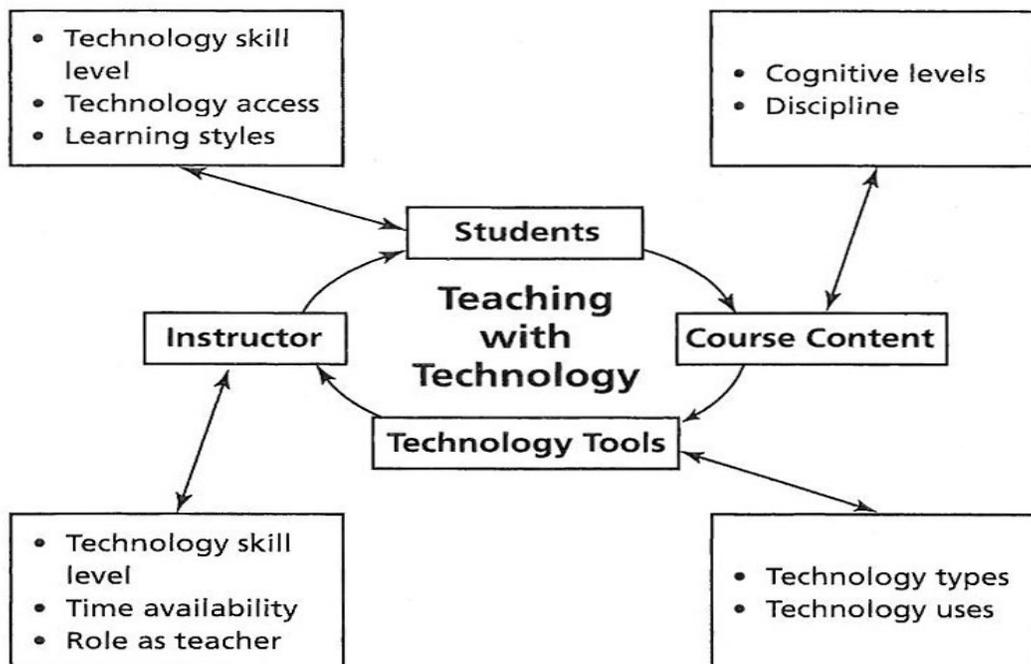


Fig 1: Technology & Teaching learning Strategy

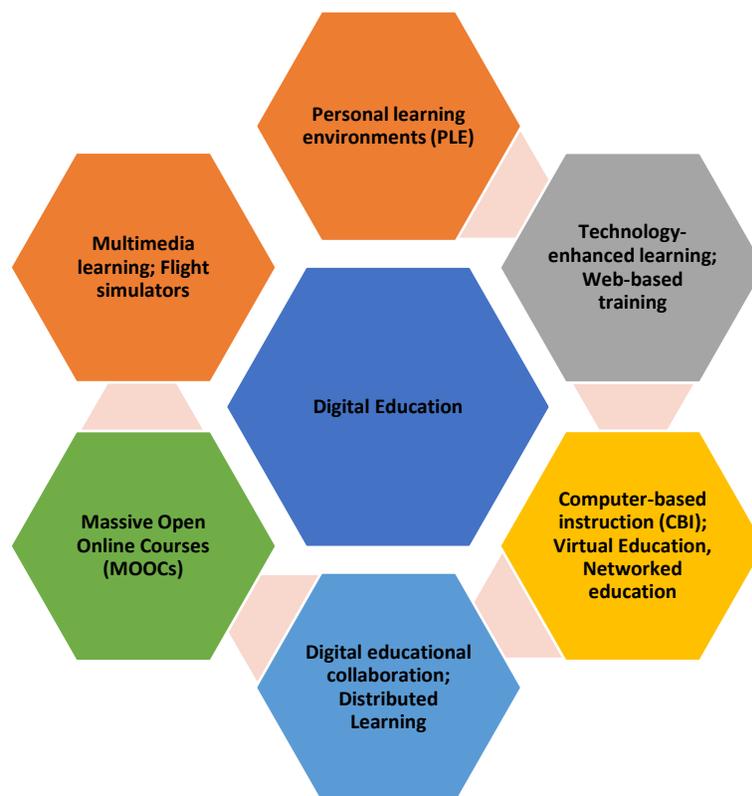
Along with the sources, there are a number of different practical and theoretical domains and disciplines, which deals with technology in the education area. Among those are:

- Learning theory

- Computer-based training (CBT)
- Online training & M-learning

Therefore, an understanding of the education along with technology can be interpreted as a practice for building and supporting education by using technological tools, as a basis for curriculum management using Educational Management Information Systems and as a subject of study and teaching in itself.

Digital Education is connected to many different ways of supporting instruction and learning as well as administration of educational organizations. Some examples are:



This change in the delivery methodology puts the focus on educational technologies that can provide solutions for **classroom management, assessment, micro-learning, affordability, and collaboration**. These identified areas of need for higher education lead to quality educational technology tools and apps for leading the way in an era of rapid change.

Further, the usage of technology in education has converted classrooms into fun, engaging and interactive spaces. As, today's learners are more tech-savvy than ever before and have grown up with technology having adapted to using it and can learn a lot more easily with it.

Few advantages of using Technology-enabled classrooms are as mentioned below:

- Digital technology drives the learning and retention rates of the tech-savvy generation
- Increased participation of the students with online learning modalities
- Easy learning occurs, which is missing in theoretical lectures
- All tech tools are available online or at most, are just a download away
- Technology allows global learning
- Podcasts and classroom gaming are all part of the learning process
- Gives a somewhat personalized learning experience, especially with the use of video calling / conferencing

Digital education plays a major role in keeping the students engaged and involved in their learning which can be considered as a major challenge for the educationist at large.

Student Engagement:

In education, the term student engagement has grown in popularity in recent decades, most likely resulting from an increased understanding of the role that factors that are intellectual, emotional, behavioral, physical, and social, play in the learning process and social development. It refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education and which can either enhance or undermine learning for students. The following figure illustrates a few ways in which student engagement may be discussed or addressed:

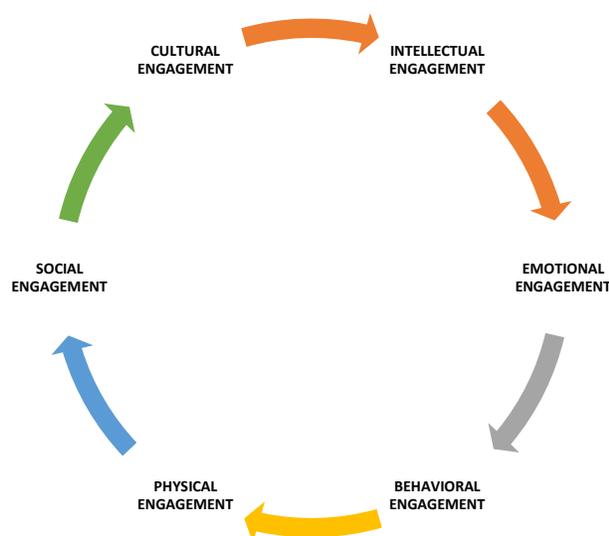


Fig 3: Types of Student Engagement

Digital technology & Student Engagement

The present student generation is constantly interacting with the technology, while thinking and processing fundamentally different than their predecessors. It is this new digital language that must now be integrated into traditional system of learning and teaching. In addition, it is important to acknowledge the role technology has on development of students' mental and intellectual faculties, majorly focusing on factors that have the greatest effect on student achievement, particularly in a technology-enhanced learning environment. Such factors include, but are not limited to: gender, grade, skills, attitude, reason for taking courses, and career goals. Technology has increased student engagement and academic performance by enhancing the learning experience. Few categories of technological tools and their impact on engagement of students inside classrooms are briefly described in the following figure:

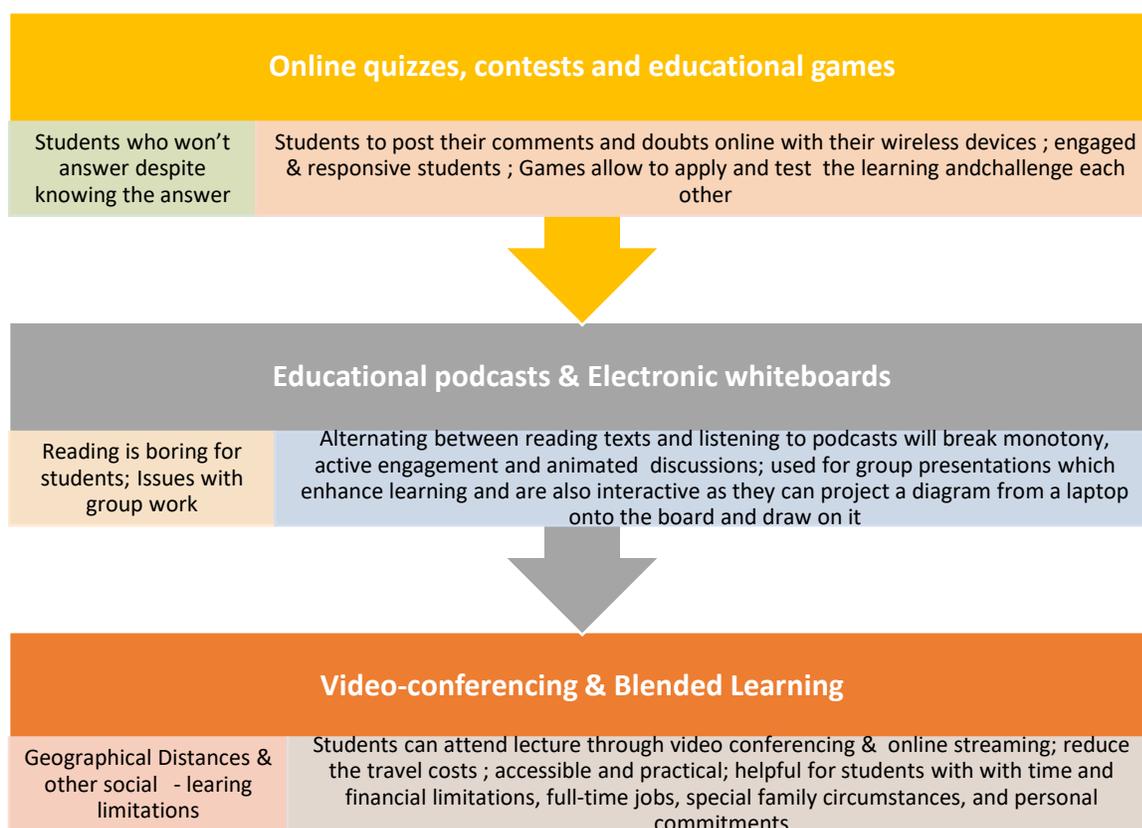


Fig 4: Types of technology tools and Student Engagement

Rationale for the Study:

Digital education is the considered implementation of appropriate tools, techniques, or processes that facilitate the application of senses, memory, and cognition to enhance teaching practices and improve learning outcomes.

Tutors have always made use of some or the other form of technological medium, which may be through the use of videos, animations or presentations to make the student understand a stated point. However, very few of them develop an interest in using technology as a complete medium for teaching and related activities and select Digital Technology as their area of work, to develop a study based on broader definition and the technological tools. Most of the tools align to different genre, however they all have a five-point theme running through them that are meant to tie the multiple facets of the concept together.

The five objectives for the selection of the technological tools under study are mentioned below:

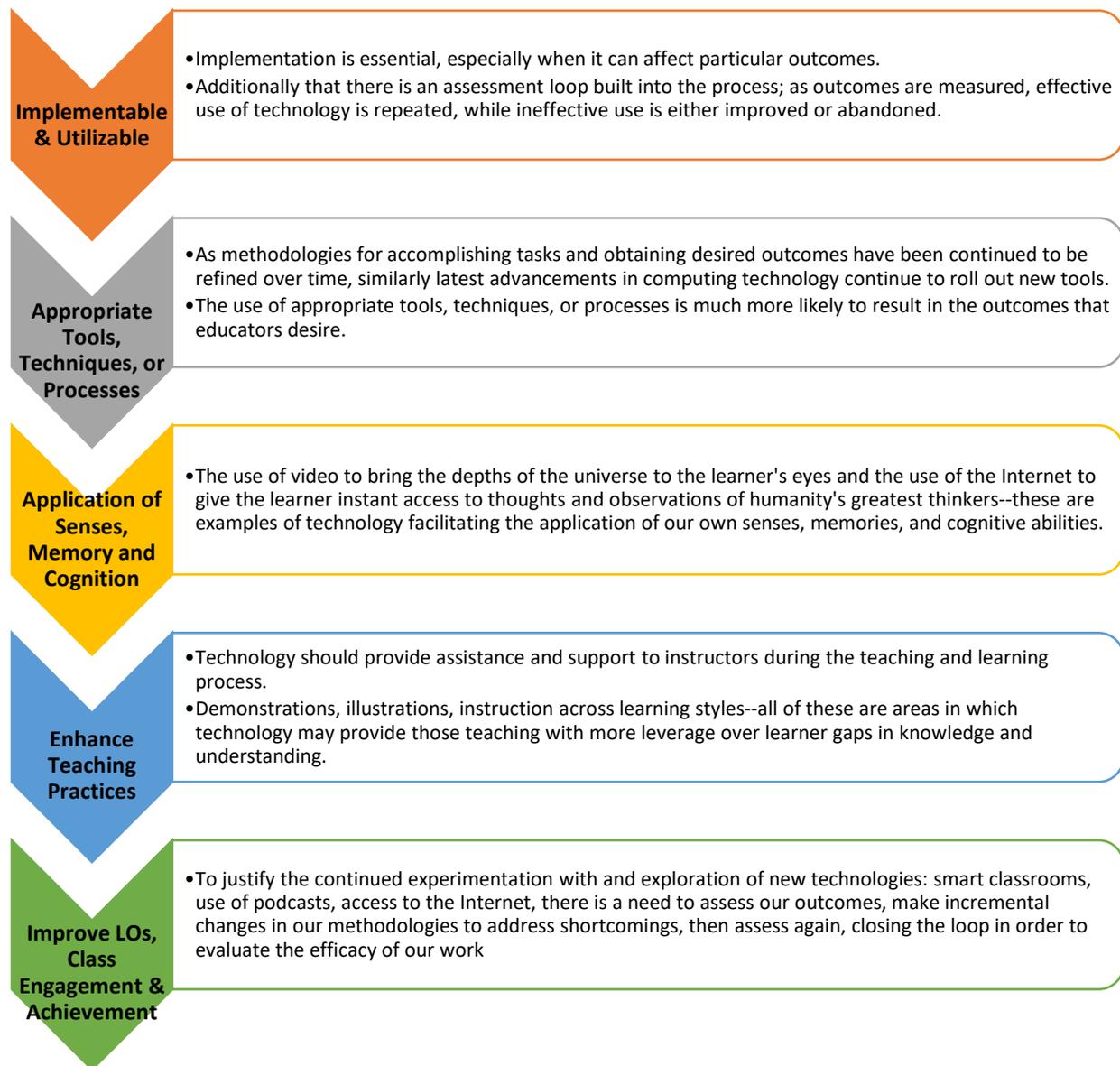


Fig 5: Objectives of the Study

The selected tools were **Kahoot**, **Trello**, **Nearpod**, **Prezi** and **Peergrade**. The description of each tool is attached as annexure which has been taken from their respective websites

(referenced at the end). These tools were used for delivery and the responses of the audiences was noted, through focus group discussions.

Discussion:

Eversince Prensky has postulate the division between “Digital Natives” and “Digital Immigrants” in his famous article (Prensky, 2001), the worldwide educational community has been trying to identify itself as one or another. Becoming a Digital Immigrant teacher in the midst of the Digital native Students has become most desirable trait for the educationists alike. In the study, therefore an attempt was made to study and review few digital tools that are being used by the education industry (primarily by teachers and students, in and outside the classroom) for their abilities of Investigating, Motivating, Assessing, Collaborating, Differentiating and Planning. The main reasons for the current trend of inclusion of digital tools in the education is because

- It saves time
- It allows for better collaboration
- It helps in differentiating instructions
- It gives more one-on-one time with students
- It helps students become more independent learners
- It increases student engagement

For the study of the same, following five tools were taken into consideration:

1. Kahoot – It create a fun learning game in minutes from multiple choice questions. Add videos, images and diagrams. Best played in a group, Players answer on their own devices, while games are displayed on a shared creen.
2. Trello –It is a collaboration tool that organizes your projects into separate boards, each containing multiple tasks. Trello tells you what’s being worked on, who’s working on what, and where something is in a process
3. Prezi – It creates more engaging, persuasive and memorable presentation. Freedom of an open canvas with spatial dimension and motion to keep audiences engaged as you guide them through your message
4. Nearpod – It helps in creating interactive presentations that teachers create and customize themselves. Control student’s activity in real-time. Interact and submit responses through any mobile device or computer.
5. Peergrade –It is the collaboration tool that organizes the projects into separate boards, each containing multiple tasks.

When we look at the characteristic of each tool as given in the below figure, following observations were made:

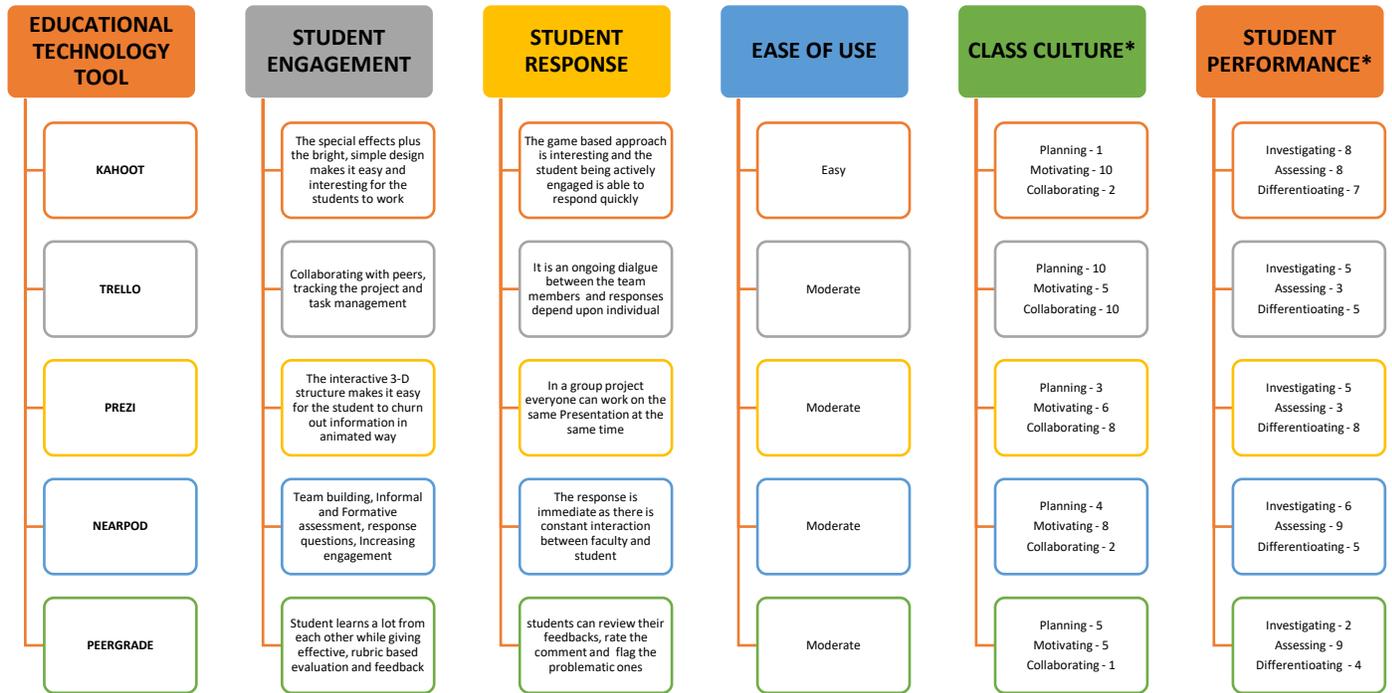
- Kahoot has the highest score for Investigation and Motivation
- Prezi scores the highest for differentiation
- Trello shows the best score for Collaboration and Planning
- Peergrade and Nearpod shows equal scores for assessing the student

Since the student engagement is best demonstrated by student performance, mapped by the Investigation, Assessment and Collaboration, it can be deemed fit that say that Nearpod & Kahoot are the best technological tools for assessing and improving the student engagement in a classroom scenario.

Kahoot is used by students to create in-class questionnaires and quizzes which is handy for obtaining data for graphing assignments, data for research essays, and feedback from their classmates. It is compatible with multiple devices and has a game-like feel that will help keep students interested.

Similarly, Nearpod works on the mobile devices wherein every student is focussing on his device while a discussion is going on. The teacher can open up a document and it appears on every student's tablet, with the teacher controlling the pacing of the slides from his tablet. So far, it already sounds like a pretty nice way to keep students more focused because they can all see it equally clearly.

Trello shows the best results for non-cognitive engagement of the students in the class room. Because so many students (and teachers of course) are in the habit of multitasking, a good skill to teach them (and yourself), is how to organize and streamline their assignments. Multiple students can be added to the same board; great for collaboration on projects.



Conclusion:

The digital technology tool should allow for appropriate technical training, professional development, and funding consistencies. The study suggested that the methods employed should be applicable to promote synthesis of reflective process, have Pedagogical and Assessment validity, redundant Technical Issues, appropriateness of Student and Tutor Experience and finally an Impact on Creative Practice. It should also include a transparent development process with the community of stakeholders, sufficient funding of infrastructure, proper screening and assessment of current and future technology needs, on-going technical equipment training, and frequent high quality professional development in the areas of instructional technology, differentiated instruction, and innovative curriculum support.

Further needs assessments should be taken to determine the range and types of technology that contribute to the greatest levels of student engagement, and ultimately student performance. Using student engagement as the driver of the plan can only encourage deeper conversations on campus regarding the seamless integration of instructional technology paired with rigorous classroom instruction. The opportunities that emerge when the technology is integrated into urban classrooms is immense. Digital age resources today transform Teachers as a facilitator to direct the students towards the right direction where as students is provided with the freedom to explore, discover and inquire. Digi-tools can enhance the teaching learning process and can make it more interactive than today. Constructivism will emerge as the new theory and technology will follow it in practice as it emphasizes on collaborative learning, real-world projects with authentic assessments with students accepting responsibility for their own learning. But all this will require internal inspiration and support system from our education system as well as the readiness to change and learn from everyone even from the students.

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