AN ANALYSIS AND REVIEW ON FUTURE OF EDUCATION IN DIGITAL AGE

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ABSTRACT

Digital technology is data driven including Emerging Technologies like AI, Augmented Reality, Virtual Reality, blockchain. It includes the classroom and learning techniques and digital education. It also provides education apps.

Keywords: *Digital Education, Digital Games, AR, VR, Learning Design, Active Learning.*

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Introduction

Digital technology is driving innovation across every aspect of life, including education. This brings opportunities in schools, colleges, universities, lifelong learning and training. However, educational technologies are not magic bullets. Just as they offer great benefits, they also create challenges, which educators need to explore and address to help shape the future of education for the benefit of all. Around globe we saw amazing resilience from students and educators as they adapted to the 'new normal'.

Over 100 million learners, educators, education and training staff world-wide were affected, and digital technologies were used on a massive and unprecedented scale. There has been a paradigm shift in how students learn, requiring a more independent yet disciplined approach. Students and educators not only have to grapple with new technology, but also a different educational framework.

There are many positives to this shift, and innovation is key to success. As we look forward to the future, things will continue to evolve, moving away from purely face-to-face, to a blended mix of physical classroom and online. This will impact many aspects of teaching and learning, including perhaps how learners are assessed One thing is certain, students will need greater self-reliance to keep focused on learning, and for this they will need support and robust, safe and reliable learning spaces. As educators we need to create these spaces, offer this support and ensure the learning content is delivered to fit this new way of learning.

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Emerging Technologies

There are many educational technologies and concepts coming on stream. Here we introduce some that you might like to reflect on, in terms of their relevance to your own practice

- **Artificial Intelligence**

A good teacher is well aware that insanity can be defined as 'trying the same thing over and over, and expecting a different result'. If a student does not understand something they have been taught, there is no point in just keep hammering away, repeating the same approach in the vain hope that the student will eventually 'get it.'

Instead, the teacher needs to try another tack – they adapt their teaching to meet the needs of that student. Or at least they would do if only they had time. The degree of personalisation a teacher can provide is often limited by their capacity and pressures such as the size of the group or class, and the pressing need to get through the lesson or seminar. In these circumstances artificial intelligence (AI) might be an effective solution. When you think about it, AI is already a regular aspect of students' everyday lives, from Alexa, through Instagram filters, to chatbots
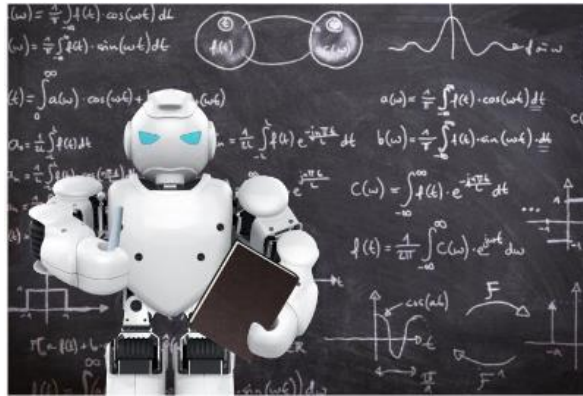
- **Virtual and Augmented Reality**

The terms 'virtual reality' and 'augmented reality' get bandied about a lot and used interchangeably but they are two differentconcepts

- **Virtual reality** (VR) headsets completely fill a learner's vision enabling her or him to step into simulated real-world environments thereby providing totally immersive, experiential and active learning. The outside world is replaced by a virtual world.

- **Augmented reality** (AR) on the other hand adds to what a learner sees rather than totally replacing their vision. AR glasses are available but these can be side-stepped by augmenting reality through the ubiquitous smartphone. Instead of needing expensive headsets, the phone's camera tracks the learner's surroundings but overlays information and images on top of it via the screen

Educational Apps

There is a constant eruption of educational apps that threaten to overwhelm and engulf educators and students. Various app like Google Meet, Zoom, Microsoft Teams are use for online Teaching.

Games and Gamification

Digital games are extremely popular, as evidence by the success of strategy games like Minecraft, Sid Meier's Civilization, The Sims, Call of Duty, FIFA Football and so on. Early digital games were designed to be played individually but many commercial games are now designed for multiple players. Gaming does not have to be all about individuals endeavoring to triumph over their competitors – it can be just as much about teaming up with others and collaborating to achieve shared goals.

Blockchain

The **blockchain concept** is based on is growing number of records ('blocks') that are cryptographically linked (and hence secure). Blockchains are resistant to the modification of data, therefore they can record transactions between parties efficiently and in a manner that is verifiable and permanent. To put things simply, blockchains efficiently ensure the integrity of the data.

Changing Classroom Dynamics

- **Teaching in chunks**: segmenting teaching and learning into activities including questions and answers, quizzes, collaboration. For example, through document sharing, peer assessment, and so on.

- **Allowing learners to 'have a voice'**: for example, setting clear goals but providing a range of resources, teaching episodes, and pathways, from which learners can 'mix and match' according to their own preferences and circumstances, in other words offering them 'hybrid learning' where they can choose between synchronous (live) offerings and asynchronous (not-live) offerings.

The Digital Educator

The traditional model of the educator as a gatekeeper; someone who decides when and how to impart knowledge and wisdom to their students, is drastically outdated. Instead, it looks like the prime purpose of an educator may be to facilitate learning, especially in enabling students to develop life skills they need for future such as:

- Resilience
- Flexibility and Adaptability
- Emotional Intelligence
- Continuous learning
- Entrepreneurial skills
- Creativity
- Critical thinking

- **Learning Design**; structuring episodes of learning and the pathways through them; selecting the most effective methods and technologies to convey concepts, to apply knowledge, to develop and practiceskills, and to assess learning;

- **Orchestrating Technologies and Tools**; for example facilitating virtual classrooms, including breakout rooms for group-working, sharing and working on content jointly with students in collaborative workspaces.

Active and Engaging Learning

One and a half billon students around the world, according to UNESCO, were engaged in remote learning at the height of the COVID-19 pandemic in March 2020. All of a sudden, everyone had to go into lockdown and students couldn't go to school anymore; the living room or another place at home suddenly became their own space. At first sight, you could say, well, this was nice: it offered freedom and gave choice and opportunities for learning. But, of course, it was not as simple as that: the spatial conditions were, in most cases, not so ideal for many students and not to mention that the whole family was sharing the same space. It is not just about the students not having the best conditions (no good devices or no good connections for the Internet, etcetera), but even if the spatial and the technical circumstances are ideal, we could not expect spontaneous engagement from the learners when they are isolated at home; students need more self-regulation skills**.**

**Enabling Active and Engaging Learning in the Digital Space**

It is important to structure the learning process, so, of course, students need some kind of guidance so that they can rely on and what we shouldn't do is to replicate what we usually do in our physical school building. It should be very well structured, but in smaller segments, we should think of a lesson as a combination of small chunks, for example, small chunks of teacher instruction, followed by small chunks of energisers, then shorter meetings so that we can help students stay focused and promote their active participation in learning.

Teachers can boost student engagement and support student centred learning by providing them rich choice: they can encourage students to choose their own learning pathways and, by doing this, they can make their learning more personal.

Teachers can do this by letting students set their own learning goals, choose their own learning materials, make substantial decisions about, for example, which activities they will complete. Also, how to organize teamwork or even how to design their own learning space. Providing students with the responsibility for their learning, which just amplifies students' voice, they becomes autonomous and confident, and they can demonstrate that they are learning in so many different and also so many creative ways.

Blended Learning

One of the first types of blended learning was the flipped classroom: in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students a they apply concepts and engage creatively in the subject matter. For example, learners asynchronously self-study the concepts of a new topic by watching videos, reading, doing e-learning, and then participate in a synchronous classroom session (face-to-face or virtual) in which, along with other learners and with teacher facilitation, they further investigate, apply, or practice what they were introduced to in the self-study phase (learning by doing). The blend can be further enhanced by adding a follow-up phase in which students consolidate or extend their learning, for example by applying what they've learned to real-world challenges. This offers a basic blend:
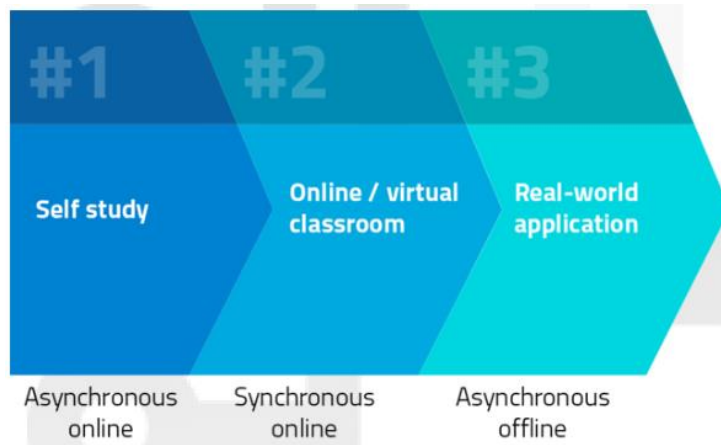
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