

ENHANCING LIFELONG LEARNING THROUGH MULTIMEDIA AND NEW TECHNOLOGY

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Abstract

Applying new technologies in learning has made constant professional development even more critical for teachers. As a result, they must be able to keep up with technological developments in the school. Their professional development includes constantly updating their skills and knowledge of how they can meet the needs of their students or solve problems that result from the use of computer technology in the learning. Online learning apps open up new opportunities for professional development by staying up to date with the skills and topics required for professional work. This paper aims to contribute to assessing the impact of online learning applications on teacher professional development by presenting specific case studies and proposing new technological tools to collect useful income-supporting quantitative metrics.

Keywords: education, technology, evaluation, lifelong learning

I. INTRODUCTION

Coronavirus disease that is called COVID-19 is new coronavirus infectious disease in the end of the year 2019. Because of the COVID-19 pandemic, educational institutions worldwide close their learning processes to avoid virus spread. More learners, approximately 90% student population in the world from kindergarten to university, have discontinued their learning. All of the students have a similar problem in conducting their education. All the governments in the world have closed the learning process to protect children from the COVID-19 pandemic. [1]

II. LIFELONG LEARNING

To succeed in the jobs of the future, the workers of tomorrow will need to become lifelong learners. The brain you graduate from college with at age 22 isn't the one you're stuck with for the rest of your life. And lifelong learning is the education that never ends: An ever-evolving mastery and proof of abilities. The excellent news about lifelong learning for employers is that it means more workers will tailor their skills directly to

their job functions. Employers who build cultures to support these future opportunities will attract the best talent [2].

That's why employers and prospective employees need to get more comfortable with alternative credentialing like specialized certifications, micro degrees, and digital badges. Employers will also need to facilitate these new models. For many companies, the safest way to venture into this new world of lifelong learning and micro-credentialing has been to modernize their own internal training programs and invest in learning opportunities that expand the skills of existing employees.. [3]

Lifelong learning is not necessarily the emergence of a new "system". It is rather an approach, which focuses on the individual's learning opportunities and process, while recognising that these opportunities and processes are catered for by many institutions in society, including not only the formal education and training systems, but also the family, the firm and the communication media The European Year of Lifelong Learning is a contribution by the European Union to mobilising all the forces which can contribute to providing the citizens of Union with the educa-

tion and training that will help them to find their place in the new world that is unfolding and to forge their individual destinies over the whole course of their lives. In doing this, it will take into account the recent developments in knowledge and in access to knowledge which have been accelerated by the emergence of the Information Society. [4]

III. EDUCATIONAL MEDIA

The Educational material became more challenging, and its scope became broader, revealing the ineffectiveness of the traditional educational system. Thus, the need for innovative technologies emerged. Today's ubiquity of information and computer technology has become an essential stimulus for the development and improvement of lifelong learning in the quality of education. In its turn, this ubiquity has led to changes in the IT infrastructure of the education system.

Game is a technology that can be used to support learning in various fields [5]. The emergence of the Social Web allows users to enhance their actions when accessing the internet to search for information and interact, collaborate, and share learning content. The emergence of the Social Web has changed the relationship with information and has opportunities for personal and professional development beyond formal education. The purpose of the presented work is to assess the impact of Social Web applications for teacher professional development by submitting specific case studies and proposing COMPUTER TECHNOLOGY tools to collect useful quantitative indicators that support this impact assessment.

IV. EDUCATIONAL DEVELOPMENT

Teachers' professional development activities include individual development, continuing education, in-service education or staff development, curriculum writing, peer collaboration, study groups, peer coaching or mentoring, conference attendance, action research, article publication, etc. Professional development programs are important to reward and encourage educator development. [6]

One of the current trends in professional development activities for teachers is conducting online learning [7]. Teachers join online learning groups inside and outside of school to explore

new and better ways of teaching and to share lesson schedules, digital resources, and experiences with web-based activities. Social networking tools (Social Web) are the current trend to support this process. Networks build and maintain informal relationships with people you know or have friendships with can bring benefits such as employment or business opportunities. In professional networks, people are willing to learn about other professionals and their career experiences.

The fundamental characteristics of distance education and network education, it was understood that the fundamentals and the main characteristic of these two modalities are different; that the purpose of network education is much broader than the purpose of distance education; that the vision of network learning is different between them; and that both use knowledge media for their purposes. Thus, it was inferred that distance education and network education are not reducible to each other. [8] They also have strong applications in education in that they serve as potential vehicles to provide richer and further enhanced learning experiences for students by supporting blended learning.[9]

Not only does what we do matters, but we can prove that it does, because above all else we have become increasingly effective advocates for what we do. Bergquist (1994) suggested that educational developers tend to "cool the mark," meaning that we gravitate towards collaboration and consensus versus confrontation, making us perhaps less effective in situations calling for stronger measures. Our persistence and growth as a field somewhat belies the latter part of this assertion, suggesting instead that the idea of educational development might just prove to be a means to reach out and grasp the distinctive organizational legacy of higher education, including our ability to harness a culture replete with intractable ambiguity, complex diversity, and daring intellectual feats. [4]

In psychology there are several schools of thought about how learning takes place, and various categorisations of these. Rationalism (or idealism) is one such school, or pole, of learning theory still with some vogue. It is based on the idea of a biological plan being in existence that unfolds in very determined directions. Chomsky was a foremost member of this pole. Associationism, a second pole, centres on the idea of forming associations between stimuli and responses.

Pavlov and Skinner belong to this pole. Further details may be found in Richardson (1985). In the twenty-first century cognitive and social theories are those used most widely, with constructivism being the best known. Many ideas about learning in the early twentieth century tended to consider the development of the individual in isolation, but by the 1920s and 1930s ideas looking at the influence of the wider context in which learning occurs and at emotional and social influences and affects became more common. [10]

V. FUTURE EDUCATIONAL TECHNOLOGY

Technology is already sweeping through classrooms as educators and developers create more and more products designed to enhance education. With an influx of new learning models available, traditional educational methods are bound to evolve in the next decade. To get a better sense of where things are heading, Business Insider has taken a closer look at technology's developing role in the field of education.

A. Latest Educational Technology

An innovative educator, following the trends in education is probably not something new but rather essential. Even with this list, however, it is still up to you to choose the most suitable "trendy" aid for your teaching and training. Here we select the 10 latest educational technology trends that are must-know when diving into this industry.

1. eLearning

Distance learning became the top 2020 educational technology trend overnight because of the rapid spread of COVID-19 and school closures. This led to a rising demand for online educational platforms. eLearning is education or training delivered electronically. It can be slide-based online activities, or it can also be an online course that helps a business train employees in necessary skills.

With eLearning, educational content is delivered to learners through computers, laptops, tablets, or smartphones. Not only saving time but opening many doors for interactive learning. Rather than being in a passive experience, learners can choose what they need to learn quickly and easily, wherever they are. They also learn

through interacting directly with on-screen information through, for instance, dragging content from one place to the next. Moreover, the decision-making scenarios in eLearning also encourage learners to make their own choices on what they will learn next.

In eLearning, learners just soak in knowledge through reading or viewing content, it changes the way education is delivered. Also, many eLearning courses include animation, podcasts, and videos that create a multimodal and practical learning experience.

The last point is, although eLearning has been around for a long time, it is staying green and continuously developing. Educators are using the advantages of technology to make learning more effective. That's why more and more online and blended learning courses are produced nowadays.

Variety is the outstanding feature of online learning platforms. You can teach your students in real time (synchronous) via live stream or group meetings using Zoom or Microsoft Teams, or you can use recorded (asynchronous) methodologies with a wide range of media and digital functions available to enrich lessons. A good online learning platform can also be combined with a Learning Management System (LMS) so you can keep track of your students' learning outcomes.

2. Video-Assisted Learning

In recent years, video-assisted learning has become more and more popular as classroom displays. The "video day" is no longer a television on a trolley being wheeled into a class. With the internet and digital devices, every day can be a "video day."

This trend is also booming in distance learning conditions, which students learn through computer screens. Videos, especially animated videos, are extremely beneficial to enrich lessons and make content comprehensible. It improves students' outcomes and reduces teachers' workload.

3. Blockchain Technology

The Distributed Ledger Technology (DLT) from blockchain brings so many benefits to education, especially data storage. Every time new data is added, it adds another "block" to the sys-

tem, so the storage is technically limitless. Simultaneously, the data will be encrypted and distributed across multiple computers in the system. It makes transacting data decentralized and transparent.

Blockchain technology is used in Massive Open Online Courses (MOOCs) and ePortfolios to verify skills and knowledge. The DLT systems will answer the problems of authentication, scale, and cost for eLearning agencies. Moreover, it can help student applicants publish their accomplishments during the job-seeking phase.

4. Big Data Will Get Bigger

To cater to learners' needs, the learning experience needs to be personalized. And with COVID-19 and online learning booming, we now have bigger data than ever before. Instructional Designers have relevant information about learners' experiences to customize and present the course in a suitable format. Some information you should look for is the course's topic, learner enrollment, learner performance (time per course, completion, test result), and learner feedback (rating, survey).

5. Artificial Intelligence (AI)

AI now is the "in thing" in the US EdTech market. People have predicted that through 2021, AI could become the primary trend and grow by more than 45%. So why is the trend booming in one of the world's largest markets for EdTech? First and foremost, AI can automate basic activities in education, like grading. It's now possible for teachers to automate grading of the multiple-choice and fill-in-the-blank questions. Thus, automated grading of students' writing may not be far behind.

Furthermore, both learners and educators could benefit from AI. For example, students could get help from AI tutors when teachers are too busy to take care of everyone. Also, AI-driven programs can give both learners and educators helpful feedback. That's why some schools use AI systems to monitor student progress and to alert teachers when there might be an issue with students' performances. Therefore, it's not too far fetched that AI is a powerful assistant for in-class teaching. Meanwhile, why don't you help your learners get more out of the educational experience via AI?

6. Learning Analytics

The current landscape of learning analytics has dramatically expanded, especially for higher education. Learning analytics allows educators to measure and report student learning just by the web. From that, it's possible for them to better understand and optimize learning.

When teachers read insights from students' learning processes, they can improve the knowledge and skill acquisition of their students accordingly. For instance, teachers are able to see what type of information (text, images, infographics, or videos) that students enjoy most and use it more in their following lessons. Also, teachers are able to notice what pieces of knowledge weren't effectively delivered and enhance them next time. Moreover, learning analytics helps educators identify blocks of students who may have academic or behavioral challenges. From that, teachers could develop a way to help students reach their full potential.

7. Gamification

If you are looking for a way to turn learning into a more fun and engaging process, gamification is the most suitable educational technology trend. There is no reason for students not to be actively involved in classroom games. Students can learn and practice while they are joining in on exciting game activities. Gaming elements help create a funny and positive learning environment for learners.

The adoption of gamification is most popular in the K-12 education sector. It's because kids are quickly engaged in gaming videos or getting higher scores in a game. However, it doesn't mean that higher education or corporate training doesn't need fun elements to improve the engagement level of learners.

8. Immersive Learning With VR And AR

The class learning experience has undergone a tremendous change since Virtual Reality (VR) and Augmented Reality (AR) came to education. The rise in demand for experiential learning pushes forward the development of learning with VR and AR.

Learning has become much more interactive than traditional methods. While VR provides a constructed reality, AR gives an enhanced view

of a real image. Thus, they help explain complex concepts that plain images or even a lab's hands-on experiments couldn't show students. For example, VR is pretty helpful when you are attending a medical training course. In detail, VR creates a chance for students to experience real-world surgeries in a low-risk environment.

9. STEAM

STEAM-based programs are the new EdTech improvement over the STEM programs. This new trend of EdTech applies meaningful Science, Technology, Engineering, Art (the new element), and Math content to solve real-world problems through hands-on learning activities.

Concerning the advantages of STEAM, the first thing is that it helps students become increasingly curious about the world around them. Moreover, it also creates a safe environment for the learners to express and experience their ideas while thinking outside the box. The comfort of hands-on learning also helps students collaborate better with others.

10. Social Media In Learning

Have you ever thought that social media would be a part of the learning process? When every student, both young and mature, spends so much time on social media, why don't we turn it into a powerful tool to enhance learning?

It's how the idea to use social media for teaching came about. Many educational institutes have started using social media as a communication tool in which students can interact with others easily. Students can share study materials, discuss with others in a group, or easily comment on someone else's post. This organization creates lessons worth sharing and posts them on YouTube where people can easily access, find, and share the educational videos with their friends.

VI. CONCLUSION

In the end, we know that there is a lot to digest when we talk about educational technology trends. However, keep in mind that technology has seeped into education and renewed its whole teaching and learning process. Especially eLearning, an educational tool that not only increases the accessibility and convenience of education but also changes the learning behaviors and

learners' desires for learning.

But here is good news, you don't need to go alone on this EdTech ship because you have us who will join you in bringing forth the true value of learning, inspiring learners, and making education more relevant and empowering.

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