Digital and Social Transformation - Technology, Innovation and Framework in Education

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Дигитална и социална трансформация- технологии, иновации и форматиране на образованието

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The author has no known conflict of interest to disclose.

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Авторът няма конфликт на интереси.

Кореспонденцията, свързана с тази статия, да бъде адресирана до проф. Теодора Петрова , Катедра „Комуникация и аудиовизуална продукция“, Факултет по журналистика и масова комуникация, СУ „Св. Климент Охридски“, София 1000, ул.“Московска“ 49, Email: petrovaiva@uni-soafia.bg

Abstract

Technology has already transformed higher education worldwide, content in media from radio and TV and audiovisual content in streaming digital platforms on the internet. If we talk about the Age of industrialisation in past centuries now we live in fast developing Age of Information where computers are talking to one another, humans are talking to computers and humans are talking to humans through computers. The important point in the Information Age is access to information and access to content. In the time being we might be able to say that we live in the Age of Google and the upcoming Age of AI. In *education t*echnology can help students and teachers to enlarge their potential to access educational processes, personalized forms of learning, online teaching, and learning opportunities which we could see during the COVID-19 pandemic. Digital platforms widen the possibilities for the internationalization of higher education through access to open science and open data in digital platforms, new opportunities for international research, and collaboration of sciences.

Keywords: digital transformation, social transformation, technology, innovation, education

Резюме

Технологиите промени вече трансформираха висшето образование в световен мащаб, трансформации настъпха в медийното съдържание в радиото и телевизията, в създаването на аудиовизуалното съдържание в стрийминг цифровите платформи в интернет. През 19ти век гворим за ролята на Ерата на индустриализацията, сега в 21ви живеем в бързо развиваща се Информационна епоха и информатизацията, където компютрите си говорят помежду си, хората говорят с компютри и хората говорят с хората чрез компютри. Един от най.-важните проблеми в Информационната ера е достъпът до информация и достъпът до съдържание. Можем да кажем, че живеем все още в епохата на Google и на прага на предстоящата епоха на ИИ/AI. Технологиите навлязоха и промениха образованието и те могат да помогнат на учениците и учителите да разширят потенциала си за достъп до образование, възможностите на образователния процес, персонализираните форми на обучение и онлайн преподаване, възможностите за учене, които видяхме това по време на пандемията от Covid -19. Съществуващите цифрови платформи разширяват възможностите за интернационализация на висшето образование чрез достъп до open science и отворени данни в цифрови платформи, предоставят нови възможности за международни изследвания и сътрудничество на учените.

Ключови думи: дигитална трансформация, социална трансформация, технологии, иновации, образование

ARTICLE INFO:
Original Article
Received: 15, 09.2023
Revised: 17, 10.2023
Accepted: 30, 11.2023

Digital and Social Transformation and Educational paradigms

Introduction

Transformation in all fields including economy, culture, communication, and social fields has occurred in the last decades of the 20th century because of the development of technology. In the last years, the focus on commercial communication has been on advertising, marketing public relations, and sales promotion. In marketing products and services are worth because of consumers'support. Transformation is inevitable everywhere. The process was fast and led to many changes in communication, education, and creative industries. In education, research produced new knowledge and research practices. Universal access to information and new technologies makes knowledge and information universally available. Technology has already transformed higher education worldwide, from radio to TV and now to the internet. It has the potential to enable the continued expansion of participation so that all students can take up their right to higher education with more flexible and personalized forms of learning. Technology can also be used to ensure pedagogical continuity, as the massive take-up of online teaching and learning during the Covid-19 pandemic has shown. Digital platforms widen the possibilities for the internationalization of higher education through virtual student mobility, international research collaborations, and more. Yet, for all the opportunities that digital transformation brings, there are also risks associated with the ongoing integration of technology into higher education. The digital divide within and between countries is perhaps the greatest global challenge hindering equitable access to and use of technology. Ethical and privacy concerns around the collection of data, as well as the use of artificial intelligence, are among the other important issues for higher education.

Education needs include electronic tools but also the adoption of digital technologies to the needs of education as well as systemic, institutional, and cultural transformations. Students need to be empowered to learn effectively and navigate a digitalized world. Training and support for teachers and researchers allow them to make optimal use of new technology.

UNESCO roadmap

According to the UNESCO roadmap. The systems and infrastructure used in higher education institutions need to be fit for purpose; governments should have up-to-date mechanisms in place to efficiently allocate resources and evaluate the role of technology in promoting high-quality and accessible higher education. "|UNESCO is working to address the challenges and opportunities of ICT in education, setting out a new roadmap for the digital transformation of education and advocating for a rights-based approach to technology and connectivity.

UNESCO IESALC is supporting these efforts through research and capacity-building projects. These currently include:

Digital competencies: Enhancing the digital competencies of teachers, researchers, students, technicians, and other higher education personnel; Building a tool to measure universities' digital maturity level; Providing technical assistance, mentoring, and expertise to help higher education institutions implement their digital strategy;

Hybridization: Developing methodological and conceptual frameworks to support higher education institutions in the implementation of hybrid models and improvement plans aimed at ensuring academic quality; Studying the hybridization of student mobility through case studies of virtual student mobility in 73 higher education institutions in partnerships spanning 38 countries;

IESALC Campus: IESALC Campus, provides a space for social and collaborative learning that strengthens the democratization of knowledge through learning, creation, and sharing; Promoting the development of a knowledge community to encourage a change of mindset through the acquisition of the necessary skills to respond to today's society;

Artificial intelligence: Creating a manual for higher education stakeholders on the impact of artificial intelligence in higher education; Providing a Quick Start Guide to ChatGPT and Artificial Intelligence, available as a downloadable pdf and an interactive seminar in Campus IESALC;

Digital transformations: Conducting multi-stakeholder consultations on the digital transformation of higher education in Latin America and the Caribbean; Adding to the Global Education Monitoring 2023 report with a study of universities' contributions to national technological development (Digital Transformations, n.d; Response to Covid 19, 2022).

Discussion

Governments worldwide are facing increasing demands for better and more secure digital communication with citizens. The dynamics of our time are mainly provoked by the information and technological boom. Digitization in all spheres, and especially in the media and political spheres, is inevitable. The Internet has opened up new channels and opportunities for civic-political communication. That is why the subject of the digitization of political-civic communication is gaining more and more public importance and relevance. In today's digital society, user-generated content reaches the electorate much faster than other communication channels. Politics, for its part, like information technology, develops intensively and dynamically, often ahead of political events themselves. This new communication environment

provides new alternatives in the development and opportunities for the realization of political communication through the new online media and especially through social networks. Digital transformation is a cultural, organizational, and operational change in any organization, industry, or industrial ecosystem, through the gradual and intelligent integration of digital technologies, processes, and competencies at all levels and across all functions.

In access to information, interactivity is the most characteristic of new media. It means the complexity of choices, level of effort of users, media of content provider's responsiveness to users, event to which media monitor to users, extent to which users can add information to sources, inter-personalization of content where the focus is on user's choices. Information is sought and selected by users. Media systems are refocused on user activity rather than the dissemination of information. Variety of messages and channels for dissemination of content. That is why in education we envisage the importance of Media literacy. Media literacy is a term that the majority of authors define as the ability to access, analyze, critically evaluate, and create and disseminate media and they focus on the term "critical thinking" which is an important feature of education in democratic social values today (Peicheva, and Milenkova, 2017).

In today's rapidly evolving digital landscape, businesses need to stay ahead of the curve to remain competitive. One way to achieve this is through a well-defined digital transformation strategy. A digital transformation strategy involves leveraging technology and data to drive innovation, improve operational efficiency, and enhance customer experience. In this article, we will provide a step-by-step guide on how businesses can develop and implement an effective digital transformation strategy. Before embarking on any digital transformation journey, businesses must assess their current state. This involves evaluating existing systems, processes, and technologies to identify areas that need improvement or replacement. Training and Upskilling: Provide adequate training and upskilling opportunities to employees to equip them with the necessary skills and knowledge required for the new digital landscape. In conclusion, developing an effective digital transformation strategy is essential for businesses aiming to thrive in today's digitally-driven world. By following this step-by-step guide, businesses can navigate their digital journey successfully while achieving their desired outcomes.

Research and Innovation are at the core of what will drive European technical, economic, social as well as environmental development in the future. In particular, open science is considered an important stepping stone in contributing to tackling these challenges. Additionally, given the

important role of European regions in the development of their respective countries and European integration, supporting the digital and environmental transformation in Europe (Innovative GovFech, 2023).

Personalized learning

An overview Personalised learning has been variously defined and interpreted in practice. Personalized learning refers to the various educational programs, instructional methods, and academic support strategies to address the distinct learning needs of each student. The goal of personalized learning is to help each student achieve academic success by first understanding the learning needs, interests, and aspirations of individual students, and then providing customized learning. The foundation of personalized learning is for each student to become involved in making decisions about their education: what they would like to learn and how. Personalisation of learning is conceptualised in a range of ways: 1. Personalisation of content; students engage with content, topics, and areas that are of particular interest to them. 2. Personalisation of pace and progress; students progress through the content and curriculum levels at their own pace. 3. Personalisation of process; instructional approaches and learning environments vary based on the students' needs and interests. Personalised learning can be used for all ages and learners, and is most effective when students have a voice in their education. For younger students, in primary school, it is possible to provide an element of choice in their learning, by building an understanding of what they need to achieve their learning goals. In primary and intermediate years, students can start keeping reflection portfolios of their work. For example, students can reflect on school work they think they do well, school work they enjoy doing, school work they find difficult and wish to improve, how they learn best, what their goals are for school work in the current term, and how they will know if they have achieved their goals. (Science of learning, (n.d.).

Lifelong Learning

Lifelong learning means pursuing education beyond the requirements of formal schooling or corporate training. "Lifelong learners" are individuals who never stop honing their skills and expanding their knowledge. They might be interested in pursuing personal or professional development, such as: Picking up a hobby; Studying a subject; Learning a language; Taking a vocational course; Playing a sport; and Joining a club. The Benefits of Lifelong Learning are: 1. Job security; 2. Career options; 3. Renewed opportunities. 5. Better cognitive health; 6. Confidence; 7. Networking opportunities. Many options for adult continuing education involve working closely with instructors and fellow learners. This allows you to connect with like-

minded professionals and grow your network. In time, this could create valuable opportunities to take your career (Talerico, (n.d.).

The National Strategy for Lifelong Learning (2014-2020)

The National strategy was adopted on January 10, 2014[1] The Document has been elaborated in response to challenges that, on one hand, have to do with Bulgaria's need to overcome the consequences of the extended debt financial crisis in Europe and worldwide preserving the national identity and cultural diversity in the course of implementing the cohesion policies.

This Strategy outlines the content, forms, environment, and interactions among all players in the lifelong learning process, that is: learners – all persons within the country, who are engaged in learning in the area of education, formal and non-formal learning or informal learning; training providers – the institutions carrying out training, (whether private or government kindergartens, schools, universities, training centres, culture institutions, etc.), which meet society's needs and the labour market's requirements;employers, trade organizations, labour unions, civil society organizations, and others are those, which set forth and meet the above requirements, which deal with the needs for education and training; the regions, municipalities, and local communities have an important part to play in the process of asserting their position as „learning regions"; government bodies – ministries and agencies – set out the national policies in the area of education and training, as well as the relevant tools and measures required to ensure the efficiency of demand and supply of LLL (Talerico, (n.d.).

The National Strategy for Lifelong Learning sets out the strategic framework of the government's policy in education and training during the 2014-2020 period. The main aim is to contribute to the attainment of the European goal for smart, sustainable, and inclusive growth.

This Strategy's context takes into account the: new goals and the new scope of learning; learner group providers; learning/teaching methods; initiatives for demand and supply of learning; supporting measures; transparency and comparability; and quality assurance.

(European Commission. Eurydice. Bulgaria, 2023)

Some examples from educational content in Bulgaria.

Digital Backpack is an electronic platform that was created to support non-present forms of learning, hybrid and present forms of learning. The platform includes digital educational content. Quick and easy access to virtual classrooms allows assignments focused on the

[1] file:///C:/Users/Admin/Desktop/3%20br%202023/1%20redakzia/Edited/Lifelong%20learning%20strategy%20%20%20%20.pdf

individual relationship between trainee and trainer. National Electronic Library of Teachers/Repository for electronic content/ was created by the Ministry of Education and Science and provides an opportunity for pedagogical specialists to publish and share authored training, didactic and methodical materials for working in an electronic environment - video lessons, training programs, innovative methods, tests, films, exercises, entertaining pedagogy, presentations and above all projects that are related both to independence in the implementation in an electronic environment. (Letter of Krassimir Vulchev Minister of science and education, 2020)

AI in education

AI has raised many talks about the use of AI in education and how it can improve teaching and help student engagement, how AI can save time and personalize learning and can help innovative teaching and learning. What we have to understand is that it is an embarrassing innovation and a new learning experience and it has to prepare e students for a future where technology is a significant part of learning. (AI in Education: Improving Teaching and Learning)

Conclusion

A brief look at guiding documents of the European Commission, UNESCO, and National documents (in Bulgaria) shows that they react with guiding policies and practical actions facing Digital transformations including transformation in the field of education, multi-stakeholder consultations, and international companies on the opportunities and risks of Digital Transformation in all fields including economy, culture, communication and social fields because of development of technology. Transformation is inevitable everywhere and in higher education. Businesses need to stay ahead and to remain competitive. One way to achieve this is through a well-defined digital transformation strategy. A digital transformation strategy involves leveraging technology and adequate training and upskilling opportunities for employees. The transformation strategy is in the field of education enhancing the digital competencies of teachers, researchers, and students. Due to the new technological opportunities of digital platforms educational institutions offer different forms of education as lifelong and Distant learning and Open education and others, they offer open digital educational content, and personalized learning and include AI in the educational process to improve teaching and help student engagement during learn

The use of AI in education has raised hopes and fears for the potential impact of AI society and culture of cognitive capacities of students, change of work fields and change in professions.AI can assist people from different fields dealing with a huge amount of information, AI can assist

teachers and students but hope it will not marginalize the role of humans in creativity decision making and effectively part of human jobs.

Technical innovations and digitalization in the field of education give new opportunities for trainers, teachers, and lecturers and new forms and opportunities for trainees and students,

We live in digital, social, cultural, educational, and even state-of-mind transformation. We live in times of ecological and environmental change when actions should be taken to transform the economy into a circular economy, renewable energy, and clean water.

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