E-Learning within the Framework of UNESCO

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Abstract - The paper follows the definition of e-learning recommended by UNESCO according to which it means an approach to facilitate and enhance learning by means of personal computers, CD-ROMs, and the Internet. This includes email, discussion forums, and collaborative software like computer supported cooperative work.

The authors analyze the 2017 UNESCO resolution dealing with the UNESCO Institute for Information Technologies in Education (IITE) and emphasize the practical relevance of the appeal addressed to Member States, intergovernmental and international non-governmental organizations, donor agencies, foundations and the private sector to contribute financially and by other appropriate means to the effective application of IITE activities in the service of Member States, in conformity with its mission, so that it may better contribute to the priorities of major program of UNESCO in the field of education.

Special attention is paid to the question of implementing UNESCO Recommendation concerning technical and vocational education and training (TVET) adopted on 13 November 2015.This document invites Member States to consider sharing knowledge, experiences and promising practices, reinforce international TVET data collection and make use of international and regional networks, conferences, and other fora.

Finally, the authors focus on the topic of the e-learning effectiveness. They conclude that to the extent that e-learning is treated as a medium, it can make much of a difference to outcomes. In this context, much depends on the type of e-learning and the use to which it is put. The continuous contribution of UNESCO in this field might have a crucial importance.

Keywords - E-Learning, Distant Education, Online Education, UNESCO, Information Technology, Sustainable Development Goals, United Nations

I. PRELIMINARY OBSERVATIONS

As a starting point it should be emphasized that we will use in this paper a definition endorsed by UNESCO for e-learning. This is a working definition without legal connotations.

E-learning is defined as an approach to facilitate and enhance learning by means of personal computers, CD-ROMs, and the Internet. This includes email, discussion forums, and collaborative software, e.g. BSCW or CSCW (computer supported cooperative work) [1].

This is not the only expression used in this field. Other terms are often used without meaningful definitions.

Distance education is the most renowned general expression frequently used with reference to distance learning. It means providing access to learning for those who are geographically distant. This expression further evolved to cover other forms of learning, e.g. online learning, e-learning, technology, mediated learning, online collaborative learning, virtual learning, web-based learning, etc.

We give preference to the term e-learning. This expression most likely originated during the 1980's. Some authors also use the same expression, but without a clear definition or

providing just a very vague reference to other terms such as online course/learning, web-based learning, web-based training, learning objects or distance learning, while believing without solid proof that all these terms can be used synonymously. In practice, what seems to be obvious is that all forms of e-learning, whether they be as applications, programs, objects, websites, etc., can eventually provide a learning opportunity for individuals [2].

From this perspective we will try to scrutinize the process of e-learning from the UNESCO's mandate in the field of education.

UNESCO was founded in 1945 and it is a specialized agency of the United Nations. Its stated purpose is to contribute to peace and security by promoting international collaboration through education, science, and culture in order to further universal respect for justice, the rule of law, and human rights and fundamental freedoms proclaimed in the UN Charter [3].

As demonstrated by discussions within the framework of UNESCO, there seemed to be some agreement about a difference between each of the terms mentioned above related to e-learning and that this difference was somehow attributed to the characteristics of each of the environments. There is a difference in how each term is being used from continent to continent. Some researchers from Asia grouped "blended learning" and "e-learning" as the same, further illustrating the lack of consistency in the use of relevant expressions.

Moreover, there are inconsistencies also with the spelling of the very term used to represent electronic learning, i.e. e-learning, e-Learning, E-Learning, and elearning. There is also a difference in how the term is spelled in specialized journal titles, such as eLearn Magazine, International Journal on E-Learning, and Electronic Journal of e-Learning [4].

However, it appears that most people seem to be more familiar with the terms e-learning and online learning which corresponds to UNESCO's approach on the matter.

II. UNESCO'S VISIONARY DOCTRINE AND PRACTICE

UNESCO's practical involvement in the e-learning process has an interesting history. It has been summarized in a relatively recent book entitled UNESCO's Utopia of Lifelong Learning: An Intellectual History, (Routledge Research in Lifelong Learning and Adult Education), 1st Edition, by Maren Elfert, a volume of 266 pages published by Routledge in London, in 2017 [5].

This volume sheds light on the global impact of UNESCO's professed humanistic goals and its shifting influence on lifelong learning around the world, including e-learning.

Another relevant book is E-Learning in the 21st Century: A Community of Inquiry Framework for Research and Practice, 3rd Edition, by D. Randy Garrison D. who is Professor Emeritus at the University of Calgary, Canada. The book has 220 pages and was publushed by Routledge in London in 2016. The volume provides a coherent, comprehensive, and empirically-based framework for understanding e-learning in higher education, focusing on technological, pedagogical, and organizational implications. It highlights both the transformative and disruptive impact that e-learning has recently had on education, offering thought-provoking considerations for scholars, educators, and administrators [6].

Mention should be made also about the article The Ultimate List (2017 Update) which refers to 74 free e-learning books written by industry's top experts. It contains recommendations offered by experienced e-learning professionals which can help create winning deliverables for both private and professional learning audiences [7].

A fundamental idea developed in recent literature on e-learning is that it is transforming education sector in a very innovative manner. The multiplication of courses and radical changes in education sector provide students with a large opportunity to decide their career as per their competence and skills. And this is beneficial not only to students, but also to

institutions, like colleges, educational bodies, corporate structures nations. We will refer in this context to two UNESCO's members: India and Romania.

The future depends on what we do in the present", used to teach Mahatma Gandhi. The number of Indian Internet users has reached 250 million, rivalling the US and second only to China. India's education system is already one of the largest in the world with a network of more than one million schools and 18,000 higher education institutions. In fact, more than half of the country's 1.2 billion population falls in the target market for education and related services.

Like in other countries, in India e-learning brings obvious advantages, the most prominent being the ability for online instructors to provide personalized attention to all students. This is important in particular for those students who cannot afford private face-to-face tutoring sessions or who live in rural areas where such help is not available. Another significant advantage is that people living in smaller towns and cities can get access to the best possible learning resources from across the world, at a very affordable price [8].

As a member of the European Union (EU), Romania is guided by decisions made at the EU level on e-learning. EU defines e-learning as "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services, as well as remote exchanges and collaboration". E-learning concept is frequently used in Romania. Currently, all Romanian universities, as well as some governmental and nongovernmental organizations use e-learning platforms with a slow but increasing frequency. The main goal of these platforms is to provide education for a growing workforce in the service sector, as well as to re-train Romanian workforce.

However, the relatively slow deployment of e-learning in Romanian universities is mainly due to the rigidity of the curriculum backed by the reluctance of the instructors, professors and academic leaders to support

such systems for reasons similar to other countries in Europe [9].

A general presentation and assessment of e-learning process can be found in the report entitled Global Education Monitoring Report 2017/18: Accountability in education: meeting our commitments, published by UNESCO in Paris in 2018. This report continues the analysis of the Sustainable Development Goal number 4 on education (SDG 4) and its 10 targets contained in 2030 Agenda adopted by the UN Summit on September 25, 2015. The report also investigates accountability-related issues in education, analyzing how all relevant actors – the international community, governments, teachers, schools, parents, students, civil society, and businesses – can provide education more effectively, efficiently and equitably and address global commitments to SDG 4. The report concludes with concrete recommendations for policy-makers working in the sector of education [10].

A useful analysis of e-learning from UNESCO's perspective is contained in the collective volume entitled The Role of Education in Enabling the Sustainable Development Agenda (Studies in Development and Society) 1st Edition, by Stephanie E.L. Bengtsson, Bilal Barakat, Raya Muttarak, Wolfgang Lutz published by Routledge in London in 2018.In 216 pages the authors explore the relationship between education and other key sectors of development in the context of the new global Sustainable Development Goals (SDG) 2030 Agenda. While it is widely understood that there is a positive relationship between education and other dimensions of development, and populations around the world show a clear desire for more and better education, education remains an under-financed and under-prioritized sector within development. Investment is usually diverted towards increasing access to formal schooling, without focusing on the intrinsic value of education as a tool for development within the international development community more broadly. Drawing on examples from both low and high income countries, the book demonstrates how 'good' education functions as an 'enabling right', impacting

positively on many other areas [11].

Another book, more nuanced about e-learning is The Power of Education: Education for All, Development, Globalisation and UNESCO (Education in the Asia-Pacific Region: Issues, Concerns and Prospects), 2015th edition by Colin Power, published by Springer in 2015.

This book deals with the power of education: the kind of education that simultaneously improves the quality of life both of individuals and the wider society. The author considers that education must be viewed as a basic human right, as a value in and of itself, and reviews the evidence on how education builds the human resources that individuals and nations need to be productive, to continue to learn, to solve problems, to be creative, and to live together and with nature in peace and harmony [12].

Education must become the engine of sustainable development. The book is unique covering the development of education in all countries of the Asia-Pacific region and beyond.

Currently UNESCO is spearheading the education for the global citizenship program that aims at equipping learners of all ages with values, knowledge and skills that are based on and instill respect for human rights, social justice, diversity, gender equality, and environmental sustainability.

One of the most relevant UNESCO documents dealing with e-learning is the resolution adopted in 2017 by UNESCO General Conference for the UNESCO Institute for Information Technologies in Education (IITE) In accordance with this document, the General Conference welcomed the positive development of transforming IITE into a cutting-edge research and policy advocacy centre in the field of information and communication technologies (ICTs) in education and recognized the importance of maintaining the functional autonomy of the Institute in order to ensure that it can provide services to the Member States in a flexible, effective and efficient way.

The General Conference emphasized and valued the important contribution of IITE to the fulfilment of UNESCO's relevant strategic objectives and the priorities, particularly with regard to policy advocacy, capacity development and knowledge services in the field of ICTs in education, through:

1) evidence-based policy research, analytical studies and the collection and dissemination of best practices on the use of ICTs in education;

2) provision of technical assistance, knowledge and information sharing with Member States on the application of ICTs in education, with particular emphasis on teachers and on the digital content of curriculum.

The General Conference expressed its gratitude to the Member States and organizations that have supported the Institute's activities intellectually and financially, and invited them to continue their support in 2018-2019 and beyond. It appealed to Member States, intergovernmental and international non-governmental organizations, donor agencies, foundations and the private sector to contribute financially and by other appropriate means to the effective application of IITE activities in the service of Member States, in conformity with its mission.

The Director-General of UNESCO was requested to report periodically to the governing bodies in the statutory reports on the contribution of IITE to the achievement of the following expected results:

1) improved national education policies and plans to advance access to equitable and quality ECCE, primary and secondary education through a system-wide lifelong learning approach;

2) research and foresight, monitoring and reporting on SDG 4-Education 2030 have effectively generated evidence, recommendations and insight to advance progress towards SDG 4 [13].

This resolution is also in harmony with the Recommendation adopted by the UNESCO General Conference on 13 November 2015

concerning technical and vocational education and training (TVET). In conformity with this recommendation, Member States should consider sharing knowledge, experiences and promising practices, reinforce international TVET data collection and make use of international and regional networks, conferences, and other fora. The UNEVOC Network is a strategic resource available to Member States for mutual learning and advancing international cooperation in TVET.

In accordance with the same document, Member States should associate entities of the United Nations system, regional bodies, including regional economic communities, relevant public and private stakeholders, civil society organizations and research networks in promoting cooperation, increasing mutual and cooperative assistance and building capacities [14].

III. CHALLENGIES AND PERSPECTIVES

The UNESCO Bangkok E-Learning Series on Information and Communication Technology (ICT) in Education published on its site a challenging article entitled, Is e-learning effective? written by Clive Shepherd, Learning and Communications Technologies Consultant, UK.

The author of this article considers that 'Is e-learning effective?' is a reasonable question, because there is no point in using a new approach if it doesn't work, however much time or money it might save.

In Clive Shepherd's opinion there is no easy answer to that question. He considers that e-learning is just a medium for learning, just like face-to-face communication, print, the telephone and countless other technologies. It is a delivery channel. He asserts: "On balance, the evidence would suggest that the medium, the delivery channel, is much less important in determining effectiveness than the learning strategy you choose to address the task in hand (exposition, instruction, guided discovery, exploration, etc.), the social context in which the medium is used (self-study, one-to-one,

group) and, indeed, the relevance and importance of the subject matter on which you are focusing".

The author of the article further explains that e-learning is a medium which opens up the possibility for methods that would otherwise be impractical or impossible to deliver using traditional means. It is providing "something different from what we had before. You cannot dismiss it as 'just another medium' because the medium has made possible the method, just as the invention of the printing press made it possible for the population as a whole to learn by reading".

To answer the question, Is e-learning effective?, the author believes that "we also have to qualify the type of e-learning that we are talking about. Do we mean instructional tutorials delivered for the individual learner? Live group sessions in a virtual classroom? The delivery of online content using web sites, video, podcasts, etc?

A short, incomplete answer to the question, Is e-learning effective? is suggested by the author in the following terms: "To the extent that a medium can make much of a difference to outcomes, it would seem that much depends on the type of e-learning and the use to which it is put" [15].

While agreeing in principle with this answer, we have to add that he is a consultant specializing in learning and communications technologies. He works with a broad range of public and private sector organizations, helping them to effectively harness the benefits of technology for workplace learning and communications.

How is this question seen in Thailand? Many answers can be provided to it. In an article entitled imminent shake-up of Thai higher education is inevitable, published by Suthichai Yoon in the Nation dated January 4, 2018, it is reminded that higher-education institutions are now facing real crisis. Without genuine and thorough reform, we are headed towards major disaster. Even if university administrators believe they are doing all they can to put their institutions through real

reform, there remains the larger question of whether they are able to think about change in our new digital age.

In this context, the article reminds the proposal for a "University of Everywhere" – made by Kevin Carey in his book "The End of College" [16]. Carey cites the unlikely collaboration between MIT and Harvard University – previously arch-rivals – to form a new online educational resource that makes lectures available for free for the whole world. He writes: "At the University of Everywhere, educational resources that have been scarce and expensive for centuries will be abundant and free. Anything that can be digitised – books, lecture videos, images, sounds and increasingly powerful digital learning environments – will be available to anyone in the world with an Internet connection".

The author of the article Suthichai Yoon considers that university admission process – which has always been the single most painful, wasteful and hopelessly ineffective way of getting a college education – could become obsolete if this new concept is finally accepted in Thailand.

Carey explains in his book: "The idea of 'admission' to college will become an anachronism, because the University of Everywhere will be open to everyone". In the light of this reality, Suthichai Yoon concludes".

Whether Thai universities like it or not, and whether we are ready for it or not, the real shake-up is just around the corner [17].

There is no doubt that e-learning will be an integral part of this process. At this point we would like to evoke a significant episode from the history of e-learning in Thailand.

In 1992, Prof. Srisakdi Charmonman proposed that Assumption University of Thailand become a Founding Organizational Member, the only country from Southeast Asia, of the Internet Society (ISOC). He then established Thailand Chapter of ISOC and has been serving as its President. In 1997 and again in 1998, he was elected to be Director of the Asia

Pacific Network Information Center (APNIC).

On April 25, 2002, Prof. Srisakdi Charmonman proposed and got approval from the board of Trustees of Assumption University to establish the first eLearning college in Thailand called the College of Internet Distance Education. He also proposed to the Thai government that Thailand legalize e-learning.

It took 3 years, negotiations and consultations with 5 ministers, and many revisions of the draft e-learning law, until it was finally published in the Royal Gazette in October 2005. AU became the first to offer a complete e-learning degree program in January 2006, i.e. Master of Science in Management and Prof. Srisakdi Charmonman was the Program Director. In May 2006, AU also offered 3 more eLearning degree programs, namely, M.Sc. in Information and Communication Technology, M.Sc. in eLearning Methodology, and Ph.D. in eLearning Methodologly the Ph.D. program is the first such Ph.D. in the world. It is in this context that, in June 2006, the International Biographical Centre in Cambridge, Uk, named Prof. Srisakdi Charmonman the "Father of Thai E-Learning" [18].

What Prof. Srisakdi Charmonman has managed to achieve as "Father of Thai E-Learning" is in full harmony with UNESCO's doctrine and practice in this field. In the Address pronounced in Dubai on 13 February 2018 by Audrey Azoulay, Director-General of UNESCO, on the occasion of the World Government Summit with the theme Collective intelligence in Action: 21st Century Challenges and UNESCO's Leading Role it is emphasized the following: "Education, science and culture, and communication are the threads that bind us together. This is the core vision of UNESCO, this is our mandate, and it is more relevant today than ever. Only through our collective intelligence can we hope to solve the unprecedented challenges we are facing" [19].

In an article entitled From Chalkboards to Chatboards: What Will eLearning Look Like in 2075? the author, Dana Rosen, quotes

Albert Einstein who said: "Your imagination is a preview of coming attractions" and invites the readers to answer the question: "When we consider education, does this mean that we will eventually live in a world where learning feels more like play and everyone has access to equal education?".

The answer is an optimistic one and we may share it: "Education today is certainly a diamond in the rough and e-learning could be the polish that cleans up sub-par teaching, provides equality across socioeconomic groups, and makes learning a whole lot more exciting. (….) in 2075, what we imagine can actually happen" [20].

By its visionary doctrine and inspiring practice UNESCO can help giving tangibility to our imagination about the future of e-learning at the local, national and global levels.

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