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AN ANALYSIS OF ICT-BASED E-LEARNING IN EUROPEAN UNION COUNTRIES DURING THE COVID-19 PANDEMIC

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ABSTRACT:

This paper explains the ICT-based E-Learning during the COVID-19 pandemic with reference to European Union member countries. It follows the E-Learning priorities agreed by the European Union institutions and Member States during the COVID-19 pandemic. This study basically identifies the challenges posed by the need for quality and efficiency. There is a broad impression that the ICT-based E-Learning in the Covid-19 Pandemic Era is helping the learning process in schools and producing better results. Higher education is also reaping major benefits from ICT-based E-Learning during Covid-19 Pandemic. The large companies and public administrations report good results from E-learning in the workplace in the era of Covid-19 Pandemic. However, it has had little effect on small and medium-sized enterprises. The digital divide, with its increased risk of social exclusion, is a growing concern, despite the potential of ICT-based E-Learning for disadvantaged learners during Covid-19 Pandemic. The experience presented in this paper appears to indicate a need for policies to focus on embedding ICT-based E-Learning tools in education systems for teaching and learning, for management and administration.

KEY WORDS: ICT, E-Learning, Covid-19 Pandemic, European Union, Lisbon treaty, National Policy, Technological innovation, Digital divide.

INTRODUCTION:

E-Learning during the Covid-19 Pandemic is a learner-focused approach to the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services. A decade of experience in the European Union member countries has proven its value as an innovative tool for education and training. This reflects the growing complexity of E-learning and its role as a basic tool for education and training. The European Union's Lisbon Council identified ICT as a core component of the knowledge society, and it also argues as a necessary instrument for adapting education and training systems to it. As a result, the E-learning Initiative and Programme were adopted in most of the European Union member countries with specific funding and the strong support of stakeholders.

Later, this led to extensive networking activities through the European Union countries' wide projects. Together with other E&T programmes, the E-learning was put on the education agenda. Since 2007, ICT-based E-Learning for education has become the general priority in European Union member countries. In this way, during Covid-19 Pandemic, the ICT-based E-Learning use in education and training has been mainstreamed and an important step towards its integration in the lifelong learning policies. Following the Lisbon treaty, the E-Europe Action Plan for the information society Strategy identified E-learning as one of its key objectives, together with E-Health and E-Government. The successive Framework Programmes have funded research on the use of ICT for learning. All the European Union member States have developed programmes to integrate ICT in education.

OBJECTIVES OF THE STUDY:

In light of the above, the proposed research aims to understand the following:

- To understand the ICT-based E-Learning process in European Union member countries.
- To analyse the ICT-based E-Learning in European Union member countries during the COVID-19 pandemic.
- To understand the reasons and motives of ICT based E-Learning process in European Union member countries during Covid-19 Pandemic.
- Internal debate in EU member countries regarding the ICT-based E-Learning during Covid-19 Pandemic.
- Impact of the Lisbon treaty on ICT-based E-Learning process in European Union member countries during Covid-19 Pandemic.

METHODOLOGY:

This work on "An analysis of ICT-based E-Learning in European Union countries during Covid-19 Pandemic" is basically an analytical work. The proposed study relies on primary sources, including official Government documents and publications. The study also proposes to hold interviews with the concerned policymakers and discussions with the experts. The study will also critically examine the secondary sources available on the subject matter, such as books, journals, periodicals, magazines, and tertiary sources such as newspapers.

LITERATURE REVIEW:

Review of literature is an important stage of Research as it provides the researcher with an overview of what has been done, and what is being done; it also gives an understanding of the **s**ubject matter there exit enough studies that usefully serve as background reference material and which facilitate better understanding. It is focused and directed towards a specific purpose. In this background, there exist several works about the subject matter of the research that could be usefully employed in the research, to mention a few-

Johannes Konig, Daniela J. Jager-Biela, Nina Glutsch, (2020), in their work, *Adapting to online teaching during Covid-19 school closure: teacher education and teacher competence effects among early career teacher in Germany*, European Journal of Teacher Education, has analyzed the social contact with students and mastered core teaching challenges and also the potential factors namely, school computer technology, teacher competence such as their technological pedagogical knowledge, and teacher education learning opportunities of digital teaching and learning. They also analysed the information and communication technologies (ICT) tools, and particularly digital teacher competence and teacher education opportunities to learn digital competence in the era of Covid-19 Pandemic. In continuation of their study, they also analysed the Implications of ICT-based E-Learning in the field of education and the adoption of ICT by teachers.

Fernando Ferri, Patrizia Grifoni and Tiziana Guzzo (2020), in their work, *Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations*, Institute for Research on Population and Social Policies, National Research Council, 00185 Rome, Italy, analysed the opportunities and challenges of emergency remote teaching based on experiences during the COVID-19 Pandemic era. In their study, as a first step, a thematic analysis of an online discussion forum with international experts from different sectors and countries was carried out. In the second step, both the data and the statements of opinion of the readers from secondary online sources,

including web articles, statistical data and legislation, were analysed. Their study results reveal several technological, pedagogical and social challenges.

THE IMPACT OF E-LEARNING IN THE EUROPEAN UNION COUNTRIES DURING THE COVID-19 PANDEMIC:

There has been strong and sustained growth in the installation and use of ICT-based E-Learning and internet equipment during Covid-19 Pandemic. Today, access to the internet and its use is general in higher education. However, the qualitative impact of ICT-based E-Learning is still being assessed. This was seen from several studies and surveys carried out by the European Commission and the European Union Member States. Even though most of these studies are linked to traditional domains of education and training, the recent move towards post-initial, informal and non-formal learning paved the way for leaning towards interactive learning, creative content, personalised and self-directed learning, etc. In other words, the context, community, collaboration, competencies, pedagogy, and motivation of learners play an increasingly important role during Covid-19 Pandemic era. This relates more closely to E-Learning to the Lifelong Learning agenda and the creation of a European Lifelong Learning Area in the Covid-19 Pandemic.

ANALYSIS AND FINDINGS:

1. School Education:

The use of ICT-based E-Learning in schools across most of the European Union member countries has increased dramatically since 2000. The European Commission, in its survey, covers teachers and head teachers, and it confirms that the Lisbon treaty targets for equipping and connecting all schools. The survey also shows that the teachers are broadly familiar with computers, using them in and out of work, and the Survey also shows that the younger teachers use ICT most readily.

2. Higher Education:

The ICT-based E-Learning is most widespread in higher education. Practically, all universities have websites, and 9 out of 10 have intranets, so the basis for ICT use is in place. This has been reflected in a steady growth of satisfaction among students. However, the sector has been slower to take advantage of the potential of ICT to redesign curricula and programmes. In the COVID-19 pandemic era, a wide range of ICT-based E-Learning programmes are now being offered by universities across most of the European Union member countries, and the number of cooperation projects to design and promote innovative e-learning practices is increasing.ICT is fostering the growing internationalisation of higher education. Networking is enabling shared courses and learning services and is pointing the way towards virtual mobility. The importance of sustainable business plans, including customer-focused objectives, was becoming evident. Accurate assessment of the student market, quality assurance and strong student support in service provision and robust, accessible technology with good technical support were identified as key features of successful plans.

3. Adult Learning:

During Covid-19 Pandemic Era, the growing use of the internet and ICT-based tools opens new learning opportunities for adults. It can help support the informal learning, which is so important to them.

4. Learning at the workplace:

During Covid-19 Pandemic Era, many large companies have invested heavily in e-learning and content management systems, reporting high levels of satisfaction and significant cost reductions. Many large public sector organisations have also followed this path. Most of these large systems are

run as web-based resource centres, which employees can access from work or from home. Home access to ICT opens the way to using them as learning resources, technical support and personal guidance. Many large organisations are now using web applications to support their business development by enabling informal learning and knowledge sharing.

5. The informal and Self-directed Learning:

During Covid-19 Pandemic Era, one of ICT based E-Learning's main strengths is its capacity to support informal learning. Self-learning and informal peer-learning are by far the two most important mechanisms for obtaining skills and competencies. Electronic networks of interests or professions provide important platforms to access and share information, to collaborate and collectively develop skills and competencies. These new ICT tools not only present new opportunities for e-learning but also offer a great potential to reconnect groups at risk of exclusion to public services, learning and civic engagement. Social networks and software tools such as blogs and wikis can help develop key skills and competencies.

6. The Digital Divide:

In the Covid-19 Pandemic Era, the strong growth in the use of ICT-based E-Learning by enterprises and households is far from being evenly distributed. The result is that while empowering some citizens, the inability of others to use ICT effectively creates a division in society, the so-called digital divide. That is why the Riga Ministerial Declaration drew attention to the broad importance of E-Inclusion. E-Inclusion would increase equity, create new opportunities for work and entrepreneurship, strengthen culture and encourage civic participation.

The Eurostat data show that this digital divide is not closing and that education is a key exclusion factor. Highly educated people are 3 times as likely to be internet users as the 33% of the population with a lower educational level. Also, the use of computers and the internet is general among young people, and nearly universal among students. 86% of those with higher education and 94% of students use the internet.

Awareness of this challenge gave the European Information Society Strategy a strong focus on digital literacy. The 2006 Riga Declaration gave this objective a specific target of halving the gap in internet usage for groups at risk of exclusion.

7. ICT for Innovation:

In the Covid-19 Pandemic Era, ICT has transformed society and the economy. The challenge is now to achieve an equally innovative transformation of the provision of education and training. The ICT-based E-Learning has a key role to play in achieving this result.

8. Pedagogical Innovation:

In the Covid-19 Pandemic Era, the ICT for learning is not only improving learning but has the potential to transform the learning and teaching processes and offer, as such, other and novel ways of education and training next to and together with more traditional schooling. The impact of ICT use on learners is closely related to its potential to innovate the teaching and learning approaches. The reviewed studies showed that learner-centred guidance, group work and inquiry projects result in better skills and competencies and that interactive forms of e-learning can lead to a more reflective, deeper, and participative learning. Learning-by-doing, inquiry learning, problem solving, creativity, etc all play a role as competencies for innovation and can be enriched and improved by using e-learning. The ICT-enabled social networks and improved connectivity also provide valuable new

lifelong learning opportunities and models bridging the distinction between learning, work, and leisure.

9. Technological Innovation:

The technological innovation implies a need for new models of production, distribution and access to digital resources, both in the public and private sectors. In the Covid-19 Pandemic Era, the European Commission under the Research and Technological Development programmes has supported research on the educational use of digital content in projects that bring together the technological, pedagogical, and organisational dimensions of the use of ICT. The uptake and commercial development of digital content for education is also one of the priorities of the programmes E-Content / E-Content Plus and E- TEN. These innovative trans-national projects award special attention to quality, interoperability, and accessibility of digital learning resources. The European Commission has supported the programmes aimed at developing digital content and facilitating its commercial development, giving priority to education. It has also supported innovative transnational projects addressing quality, interoperability, and accessibility of digital learning resources.

The Commission is supporting the development of e-learning standards. Stakeholders have launched several initiatives to improve remote e-learning and quality. These include the European Learning Industry Group (ELIG) and the European Foundation for Quality in eLearning (EFQUEL). These initiatives will contribute to the quality of e-learning as well as to developing educational systems.

10. Organisational Innovation:

During the Covid-19 Pandemic Era, the organisational change will increase the impact of ICT-based E-Learning in education and training, as schools evolve towards open learning centres, universities towards teaching service providers, companies towards learning organizations and cities and regions towards learning support environments. Changes in pedagogy and organisation will come with growing e-maturity. This will require innovative use of ICT-based E-Learning, supporting new collaborative approaches. It will be important to involve users, i.e. learners, teachers, and workers, who are players in organisational and operational innovation. Assessment systems are essential to effective education. They need to address the impact of ICT in learning and to make the best use of ICT-based E-Learning for assessment. E-assessment can help both the management and the practical aspects.

CONCLUSION:

The ICT-based E-Learning in the Covid-19 Pandemic Era is pervasive in shaping all parts of our society, economy, and culture. Since 2000, most of the European Union member countries have stepped up their activities to improve E-learning and the development of digital competencies through education. This has continued under the Renewed Lisbon Agenda and the July 2008 Communication on the Renewed Social Agenda for Europe, which has highlighted ICT-based E-Learning as a key mechanism to create more social and economic opportunities for EU citizens and improve their access to quality services.

Overall, in the Covid-19 Pandemic Era, the hope is to bring ICT-based E-Learning closer to the task of creating a European Lifelong Learning Area. In the last decade, the EU has achieved considerable success in introducing ICT-based E-Learning to education and training. Today, in the Covid-19 Pandemic Era, the pedagogical, technological, and organisational innovations demand a renewed and more comprehensive approach towards the role of ICT in education and training. A priority is to exploit infrastructure investments fully. The innovation is today seen as one of the main engines of long-term economic growth and social development. ICT, a key driver for change in many fields, must

also leverage change in education and training. Intelligent use of ICT-based E-Learning can scale up the core functions of education and build active learning communities in a networked society. A fresh impetus is needed to enable European education and training to better respond to the growing need for innovativeness. This calls for more than just improving the knowledge base and easily measurable knowledge levels. The system change has happened in other parts of our social and economic fabric, and it can also happen in education and training in the near future.

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