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CHALLENGES IN THE DEVELOPMENT OF 21ST CENTURY COMPETENCIES

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Abstract: *THE CONCEPT OF COMPETENCES FOR THE 21ST CENTURY IS A RELATIVELY NEW ONE, WHICH IN THE CONTEXT OF THE CURRENT CHALLENGES OF THE ECONOMY AND SOCIETY AS A WHOLE, REPRESENTS A REAL INTEREST FOR THE EDUCATION SYSTEMS. FOR THIS REASON, A LARGE NUMBER OF PRIVATE AND PUBLIC ORGANIZATIONS IN THE FIELD OF EDUCATION OR ECONOMICS ONE, IN NUMEROUS STUDIES AND RESEARCH, HAVE TRIED TO DEFINE THE SKILLS THAT YOUNG PEOPLE NEED IN THE 21ST CENTURY. THESE ATTEMPTS TO DEFINE THE TERM COMPETENCES FOR THE 21ST CENTURY BY ORGANIZATIONS WITH DIFFERENT EXPERIENCES AND PRIORITIES HAVE LED TO DIFFERENT, NON-UNITARY APPROACHES, USING THE SAME TERMS WITH MANY DIFFERENT MEANINGS, CAN LEAD TO CONFUSION AND MISUNDERSTANDINGS. THIS PAPER SEEKS TO IDENTIFY COMMON AND DIVERGENT POINTS BETWEEN THE VARIOUS APPROACHES TO IDENTIFY THE CHALLENGES TO BE OVERCOME IN THEIR DEVELOPMENT.*

Keywords: *COMPETENCES FOR THE 21ST CENTURY, DIGITAL LEARNING, KNOWLEDGE SOCIETY*

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INTRODUCTION

We are facing a defining moment for society as a whole, and the decisions and the choices we make today will affect generations. We are facing unprecedented challenges, due to the process of globalization and the rapid development of technology, which is why the future is uncertain, unpredictable. The students entering the school gate this year are young adults graduating. For these

reasons, schools must be ready to train those skills and "skills for jobs" that are the path to employability for jobs that have not been created, for technologies that have not been invented, and ready to solve problems that have not been anticipated. (OECD, European Commission, 2020, WEF, 2020).

Globalization and internationalization of the economy, coupled with an unprecedented development of technology, have dramatically changed the way our lives are conducted. Globalization process is not new, but initially it referred mainly to economic issues, to a single global market, one with interdependent production. With human migration, as a form of expansion of capitalism, globalization has led to the intensification of cultural exchange and ideas. After 1990, when ideas and knowledge became simple traded "goods", a new concept has taken shape, that of "knowledge society". (Anderson, 2008).

In a knowledge society, characterized by unprecedented technological progress, which according to the World Economic Forum, brought the world to the 4th industrial revolution, and this led to an acute demand for other skills and abilities than a few decades ago.

The pace of change is growing, favored mainly by new technologies, and young people need skills and abilities such as adaptation, communication, the ability to learn, to help them in a global economy, where labor mobility becomes a priority. Thus, the emphasis shifts from the level of knowledge of an employee at a given time, on lifelong learning, adaptability to change, collaboration, communication, mediation, critical thinking and especially digital skills.

Reich in 1992 and Dede in 2009 stated that with the increasing degree of integration of new technologies in all branches of the economy, the structure of jobs will change in a few years, jobs that require repetitive activities being the first to disappear, young people needing completely different skills.

These new competencies are known as the Competences of the 21st century and contain a series of knowledge, skills, attitudes, which are considered to be of critical importance for the success of young people in the world of tomorrow. Communities expect their graduates to be ready to thrive in the digital age, but the 21st century skills needed for such success are not well defined, not included in many learning standards, and without 21st century skills, students are prepared to succeed in yesterday's world - not tomorrow's. (Lemke, 2003).

21st century learning refers to the dialectical interactions between theory and practice, individuals and communities, formal and informal learning, students and meta-cognitive brokers. (Lee, Hung, 2012)

FRAMEWORKS FOR 21ST CENTURY COMPETENCES

Although the concept of Competences for the 21st century is a relatively new one, the interest shown towards it has been approached by a large number of organizations, so Dede (2009) draws attention to the risk of several concepts being brought together under the same names. Exactly different experiences and fields from which these organizations come can lead to approaches lacking clarity and unity, when specialists end up using the same words, but with different meanings - the problem of the Tower of Babel.

For example, the OECD in 2004 refers to 21st Century Skills as lifelong learning, while the European Commission uses the term key competences, which are interdisciplinary, and in other countries such as the US the grounded term is 21st Century skills.

There are currently several frameworks for 21st Century Skills, the best known of which are:

- The Partnership for 21st Century Skills Framework (2006) - developed in the US by a P21 national organization, formed in 2001 with support from the US government and several private sector

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organizations (Apple Computer Inc., Cisco Systems, Dell) (http://www.21stcenturyskills.org). (Voogt, 2012).

- EnGauge was developed in 2003 by the Metiri and Learning Point Associates group with the aim of promoting 21st century skills among students and teachers. (Lemke, 2003).

- Assessment and Teaching of 21st Century Skills (ATCS) was developed as part of an international project, sponsored by Cisco, Intel and Microsoft. (Voogt, 2012).

- 21st Century skills and competences for new millennium learners has been an initiative of the Organization for Economic Co-operation and Development since 2005 (OECD, 2005).

- Key competences for lifelong learning, a European reference framework, was developed within the „Education and Training 2010" work program. (European Commission, 2018)

- The American Association of Colleges and Universities created in 2007 a framework that defines the essential learning outcomes based on the knowledge and skills gained from a liberal education, providing a framework to guide the cumulative progress of students. (AACU, 2007).

- ICT competency standards for teachers is a framework that tries to identify those digital skills that teachers need to increase their performance. The framework was also made with the support of renowned technology companies such as Microsoft, Intel, Cisco, the International Society for Technology in Education (ISTE) and Virginia Tech.

THE COMPETENCES OF THE 21ST CENTURY

By comparatively analyzing these frameworks, we can extract the main competencies of the 21st century targeted by them:

- Collaboration - In accordance to 21 CLD Learning Activity Rubrics, in the traditional school, students receive grades based on the individual activity performed which does not prepare them for the workplace, where the emphasis is on teamwork to perform complex tasks.

Young graduates must have the skills to collaborate, negotiate, conflict resolution, of assuming tasks and distributing them, listen to the ideas of others and integrate them into a coherent whole. Thus, according to Towards Defining 21st Century Competencies for Ontario in 2015, strong collaborative skills are needed to work productively in a team and to integrate individual expertise and ideas into a coherent solution.

- Communication - According to Fullan 2013, in the context of the 21st century refers not only to the ability to communicate effectively, orally, in writing, and with a variety of digital tools, but also to listening skills. And according to 21 CLD Learning Activity Rubrics, 21st Century Communication can take many different forms, from informal classroom discussions, either face-to-face or online in which students develop their ideas in a permanent way.

Communication is seen as a necessity for success in the labor market, regardless of education level or type of work.

According to Finegold and Notabartolo (2010), communication is an essential skill to function well in society and at work and to participate in an effective dialogue with others. The importance of communication skills was also mentioned in each framework presented.

- Critical thinking and problem solving- is described by Fullan (2013) as the ability to design and manage projects, solve problems and make efficientdecisions using a variety of tools and resources. World Bank (2008) considers that critical thinking skills should become a feature of education systems around the world, as these skills for the global labor market is increasingly in demand. Harlen and Deakin Crick (2003) refering to this competence, claiming that the neglect of creative and critical thinking in assessment methods is a cause for concern, given the importance of these skills in preparation for life in a rapidly changing society and for lifelong learning.

Problem solving is considered to be the most complex of all intellectual functions, being defined as a higher-order cognitive process. In today's workplace, problem-solving tasks are very numerous and employees must be skilled in generating and testing creative ideas to solve a problem with a real set of requirements and constraints. (21 CLD Learning Activity Rubrics*).*

- Digital skills - In globalized knowledge-based economies, young graduates need more and more skills not only to intelligently consume information and ideas, but also to design and create new information and ideas using technology. Today, technology means the full range of digital tools available, both hardware (computers, laptops, tablets and notebooks, e-readers, smartphones, personal assistants, camcorders, etc.) and software (any internet browser and tools multimedia development, engineering applications, social media and collaborative editing platforms). (21 CLD Learning Activity Rubrics).

According to the P21 framework, digital skills are seen as digital literacy that consists of three key components: Information literacy, Media literacy, and Information technology literacy. Where Information literacy is the ability to select, evaluate and use information efficiently and ethically, Information technology literacy refers to the ability to use digital technology, and Media literacy is associated with the ability to access, analyze, evaluate and communicate messages within a variety of shapes. (Chu,S.K.,W., Reynolds, R., Tavares, N.J., Notari, M.,Celina Wing Yi Lee. C.,W.,Y., 2017).

CONCLUSIONS AND DISCUSSIONS

Comparatively analyzing these frameworks developed by both international public and private organizations , the following conclusions could be obtained:

- all frameworks agree on the importance of collaboration skills, communication, digital skills, but also socio-cultural ones. (Dede, 2009).
- most frameworks focus on creativity, critical thinking, problem solving and product development. (Voogt, 2012).
- a small number of frames refer to: Learning to learn, Self direction, Planing, Flexibility and adaptability, Mathematics, communication in mother tongues, science, history and art.
- only in one frame appear competencies such as: Risk taking, Manage and solve conflicts, Sense of initiative and entrepreneurship, interdisciplinary themes, Core subject like economics, geography, government and civic.
- ICT is at the heart of every framework, being considered thus not only by the need to produce new information, but also to acquire new skills. Thus, its potential in the development of critical thinking, problem solving, communication and collaboration is highlighted.
- in some frameworks, reference is made to ICT-related skills: information literacy, technology literacy and ICT literacy.

Although each framework using distinct approaches introduces different nuances that it emphasizes, all frameworks are grouped around a common set of competencies. Differences in procedure and terminology can be a little confusing, but they are not able to create that situation of the Tower of Babel. (Voogt, 2012, Dede, 2009).

Voogt's (2009) findings point to the central role of ICT, seen as both an argument for the need for 21st century skills and a tool that can support the acquisition and assessment of 21st century skills. Thus, ICT requires a complete set of skills beyond simple use of ICT tools and applications.

Also, competencies such as communication and collaboration capitalized together with ICT can contribute considerably to the acquisition of other competencies.

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