

# Key Competence Development Under Global Economy Digitalisation

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**Abstract.** Key competences today should be formed in all the areas of social life, including the state or a business. We should understand that key competences are very broadly defined, and in some cases they include skills, human know-how, and in others they are competitive advantages of companies, or a competence-orientated approach to social system management. However, today new trends are relevant that affect the development of key competencies in all the areas of social relations, including the ongoing economy digitalisation. It influences all the areas of global and national economies and calls for increased intellectual capacity of a person that constitutes special competitive advantages of companies and needs a higher level of public management.

We should also explore the current trends in the development of key competences under the digitalisation of global economy.

## 1. Review of the main concepts

The word competence has the following origins: to correspond; experiences of and knowledge on a specific area of activity; issues or terms of reference in an area of knowledge. The term competence (from Latin *competens*, corresponding) is used in different spheres. This term is used to designate number of powers is that bodies or persons should have or have according to laws, norms, charts, etc. (Raizberg, Lozovsky and all., 2003).

The term 'competence' is used in various areas, for example in education, where every student should have competences after completing a curriculum, an internship and an educational course. The research of the competence-based approach is used by psychology specialists to recruit employees.

Key competencies are explored by Russian and foreign authors.

For example, according to Steve Whiddett and Sarah Hollyforde the term 'competence' covers the behaviour of a person, which he or she demonstrates while performing tasks in an organisation. Patricia Marshall sees competence as the basic specific feature of a human, which allows him or her to perform tasks, play a social role and act in a specific situation of the highest level. D. McClelland believes that a competence is a characteristic of an employee that can be measured and allows to distinguish workers with good performance from workers with poor performance. We should say that the majority of foreign publications define a competence from the management point of view.

J.A. Schumpeter in his work "The theory of economic development" applies the term differently. He stresses that the foundation of a company requires great talent: "If someone has everything he needs to achieve success... he can get the necessary loan, produce and deliver to the market a unit of

production with less costs... his success will pave the way for others establishing a standard that will be followed" (Corbet&Wassenhove, 1993).

J.A. Schumpeter identifies the specific features of a businessman: "he sets the standard for others and shows the way". Then he mentions the creation of the new goods that meets the needs better (Schumpeter, 2008).

The analysis of theoretical works by Russian authors on the explored issue showed the pattern similar to the one identified by foreign experts. For example, E.F.Zeer defines a competence as a number of professional skills and knowledge, and means of fulfilling professional tasks. A.Y. Kibanov explains a competence as a rational combination of knowledge, skills, which employees in a given organisation possess during a short period of time. S.V. Shekshnya characterises a competence as a mobility to constantly fulfil specific production functions and actions.

Other Russian authors believe that a competence is knowledge of a number of questions, which a person possess along with expertise, experience that allow them to make judgements about something, and determine their abilities, opportunities and skills in an area of activities (Gorodnova, 2010).

Today the definition of a basic competence is being developed, which includes competencies useful during the whole human life in all areas of activities and that form the foundation of his or her professional competencies, thus determining the ability for creative thinking, productive work, constant self-development and responsible life (Kondakov).

Digital competences are also the focus, they are defined as an ability to solve complex problems in the area of information and communication technologies (ICT): to create and develop content with the help of digital technologies, including search for and exchange of information, answers to questions, interaction with other people and software development. The European commission in its definition of digital competence developed under the digital education action plan (DEAP) stresses the importance of informed and responsible use of digital technologies in education, work and in public life. Digital competence must include the ability for digital corporation, strengthening security and solving problems<sup>1</sup>.

## **2. Theory**

When scientists develop the theory and analyse the competence-based approach, stages must be identified that are determined by the development of global economy, the type of economic system, the technology development stage, crisis phenomena in the world as a whole and on the national level in particular.

We should say that In the preindustrial era skills associated with agriculture, exchange and sale of the produced crops were needed and had to be developed. The first revolution in the way of life was the transition from gathering to agriculture which happened 10,000 years ago thanks to domestication of animals. The agricultural revolution was based on over united forces of animals and people with a view to ensure production, transportation and communication. Step-by-step of the efficiency of food production increased, boosting the growth of population and ensuring the life of large communities. In time that resulted in urbanization and flourishing cities.

During the industrial revolution from 1760s to 1840s, the need for competences was determined by manufacturing, machines and equipment, and work in mills and factories The trigger was the construction of railways and the invention of a steam boiler, which promoted the development of mechanical production. The second industrial revolution from late 19th century to early 20th century laid the foundation for mass production thanks to the development of electricity and introduction of all the assembly line technology (Schwab, 2016).

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<sup>1</sup> Digital skills education: global challenges and good practices. Analytical report to the III International conference "More than education: how we can develop digital skills", Corporate University of Sberbank. - Moscow: Open Youth University Continuing Professional Education Autonomous Non-Commercial Organization Corporate University of Sberbank, 2018. - 122 p.

In the middle of the twentieth century, semiconductors, computing machines in the 1960s, the advent of personal computers in the 1970s and 1980s and the Internet in the 1990s, there emerged a need for employees with higher qualification who could operate a computer.

Today a new key competences are created that are determined by the fourth Industrial Revolution, when production develops due to exploration activities (Schwab, 2016). The development of key competencies is determined by number of factors, including digitalisation of the economy and the creation of Industry 4.0. At the same time, human resources capacity development has specific aspects. Creation of the new generation Universities 3.0. Today intellectual capital is the main source of profit for individuals, organisations, regions, countries, and peoples.

### **3. Research outcomes**

When we identify stages in the development of competencies, we should also define the changes in the labour market. During the Industrial Revolution there is a considerable demand for working professions that can manage production.

Digital revolution determines higher demand for IT professionals site developers. Process control has already been introduced into many professions including those associated with mechanical, monotonous and accurate manual labour. Other professions will follow, as computing capacity continues to grow exponentially. Such professions as always, financial analysts, doctors, journalists, accountants, insurance agents or librarians can be partially or fully automatically controlled in the near future.

In the post industrial society, knowledge is the main factor of economic growth and ensuring welfare. In the knowledge society, service sector as well as scientific and technological production grow.

According to estimates, the fourth Industrial Revolution creates less jobs in new sectors than the previous ones. Oxford Martin School Says that in terms of technology and employment, only 0.5% of labour resources in the US are employed in sectors and that that had not existed in the beginning of the century; less than 8% of the new jobs were created in the 1980s, and 4.5% of new jobs were generated in the 1990s.

In the age of Industrial Revolution researchers make a conclusion of the changes in employment structure. Some experts believe that the employment rate will be high.

According to the report of International Economic Forum experts, 5 million people can lose their jobs by 2020. Klaus Schwab believes that smart production will increase inequality both in national economies and on the global level (Schwab, 2016). Boston global group analysts forecast Changes in the industrial competence and profession structure: The demand for employees with skills in software development and information technologies will grow, knowledge-intensive services are developing (R&D, programming, consulting, and financial services).

Under such conditions, the need for specific key competences grows for the purposes of developing highly qualified employees who require more Living Knowledge, or experience, creative potential, and high intellectual level. In the future this will allow to reduce the risk of process control, which is characteristic for professions that require social and creative skills, analytical expertise and innovative approaches, and decision-making process under uncertainty and instability.

Non-linear thinking, skewness, non-typical tasks, frequent priority change require participation of people. Artificial intelligence allows to simulate personal human communication; it performs their labour functions and does it well, if not better. However, that does not affect of the necessity to make emotion-based decisions. Today only a human can make them. Only a human has the ability to accumulate his or her experience, which forms the foundation for the future. Human psychology is a necessary foundation that it allows us to think and reason, and accumulate new knowledge and experience, and set tasks for new devices. We shouldn't forget that technology development is directly associated with human development. In order to manage innovations, we should focus on their root cause, or our own development. If we think about it, today emotions and feelings are widely used in

all the areas. It is this approach that it allows to address the most concerning challenges that are associated with the activities of the most irrational being on the planet, namely the human.

At the same time, taking into account the accelerated technological development, the ability of an individual to quickly adapt to new skills will be the most relevant (Mokrova, 2018).

In order to be in demand into labour market, a person should acquire new knowledge quicker than before. New approaches to education are explored, education models are transforming. Key education tasks include the development of curricula that would meet the requirements of the quickly changing labour market and human needs, as well as costs reduced thanks to new technologies (Global Education Futures Report, 2018)<sup>2</sup>. The most relevant trends in education: Continuous learning or lifelong learning, omnilearning (education that employs all the possible means of communication), social learning, micro-education, adaptive education, neuro education, distance learning, mentorship, mixed indication, project oriented education, self learning organisations, EdTech start-ups, etc.

The very definition of the profession is changing, because the set of competencies of every employee in a profession or a specialisation, is no longer constant; competence profiles are becoming volatile, they adjust to technological and organisational changes and become dynamic portfolios.

At the same time we must mention some problems that can result from new digital economy competencies:

1. Online education taking the place of the traditional one, decreasing role of universities as a place for undergoing personal competence oriented processes;

2. Limited access to knowledge vs. quick and accessible search for the necessary information on the Internet; new ideas, concepts through borrowing, plagiarism, which slow down the development of the scientific pillar of the key competences According to Malinetsky "There are more and more information, But eat affects the right saving technologists less and less. The medicine in an excessive dosage becomes poison" (Malinetsky, 2018).

3. Development of key competencies, their basics, an attempt to set the standard, to develop general competences for everyone.

4. Changing value of education, double standards, when theory is not valuable for the future competence-oriented approach to the digital economy.

5. New ways of social interaction in professional activities of the new generation that has poorly developed organisation and management functions, cannot integrate into existing teams and adapt to them, has difficulties in making independent decisions, resolving conflicts and other issues associated with social relations (Danilov, 2019).

6. Abstract competence models that are not determined by cultural and historical traditions of the country, where they are employed or by social and economic development goals.

Is the same time today a new approach to professional education is necessary that would provide for new basic competences and new approaches taking into account the requirements of the digital economy.

1. Creation of "new classes" that quickly adapt, adjust to new technologies and the conditions of the digital environment.

2. Structural business transformation with "new businessman" that own internet businesses can profit from preferences, behaviour, emotions and people.

3. The establishment of social institutes and mechanisms that would link organisational, technological and financial resources to the actual interests of people.

4. New intellectual professions demand such human qualities as creative thinking, non-standard thinking, the ability to adapt to the quickly changing conditions and environments, illogical thinking (Ganin, 2018).

5. Design and implementation of human capital development concept that would include both education and capacity building and boosting demand for knowledge competence employees.

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<sup>2</sup> Global Education Futures Report, 2018 [http://www.globaledufutures.org/images/people/GEF\\_april26-min.pdf](http://www.globaledufutures.org/images/people/GEF_april26-min.pdf)

#### 4. Conclusions

So, under the digitalisation of the global economy, people as the main source of ideas, knowledge, the ability to use that knowledge, materialisation play the main part. Under the tense competition between global companies, those benefit who can select the best option from the internet of things and ideas with all its variety. So the question is phrased: how to find the best and the most modern idea? Here we can propose the most obvious answer: humans. However, it is not just a standard thinking individual, but a person with creative ideas, non-standard approach to decision-making, a troubleshooter that can, above all, implement his or her ideas by working hard on them. This is a why in order to develop such specific competences, it is necessary to create conditions and address certain problems.

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