

DOI: <https://doi.org/10.53486/cike2022.15>

CZU: [37.036.5:378.4]:330.3(100)

## CONSIDERATIONS REGARDING THE RESOURCE OF HUMAN CREATIVITY IN THE CONTEXT OF VARIOUS EDUCATIONAL SYSTEMS OF COUNTRIES

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***Abstract.** The article aims to analyse the considerations on the human creativity in the context of educational systems of the countries of the world. The complexity of the aspects and impact of creativity resource is very wide, and involves synthesizing knowledge, experience and wisdom, on the one hand, and on the other, the efficient strategic planning and implementation of educational policies' processes are directly dependent on how creative the stakeholders as main actors are to contribute and facilitate the interest and love for learning, research and development of pupils and students involvement. It is inconceivable that anyone would overlook the imperative connection between the quality of the education system and the quality of life in any society, be it in the west or in the east of the world. The authors of the research show that the more creative the persons are due to individual perspectives and development or to educational system contribution, the more creative economic activity can be generated, and the educational system can strategically facilitate and promote this concept and phenomena.*

**Keywords:** human creativity, education, creativity resource, economic activity.

**JEL Classification:** 015, I20

### 1. Introduction

The recent decades many countries of the world showed big interest in creative and innovative educational technologies corresponding to the new models of education that have been intensively developed. The dominant feature of the creatively organized educational process is the development of a creative personality.

The development of creativity resource is considered to be a continuous process, education being the most important stage of this process. Today's mass education is not able to provide conditions for the realization of personal creativity. The usual reproductive model of education continues to transmit knowledge, develop reproductive abilities, and monitor the mastery of these abilities. Often creative personalities are formed only as a result of lucky coincidences of events favorable to their creative abilities. Thus, within the traditional educational paradigm, the development of creativity is the exception rather than the rule.

Therefore, in many developed countries, in recent decades, the demand for corporate trainings has increased in order to develop the creative skills of the personnel of companies operating in various sectors of the economy. At such trainings, specialists with the help of creative techniques such as mind mapping, brainstorming, problem solving, try to reanimate

the initial creativity of the child, buried under the shelter of knowledge, skills and abilities acquired in educational institutions. Yet, to build a creative society, it is not enough to awaken the creativity of managers. A more productive solution seems to be to focus on the creative approach to education, which ideally should diagnose, support, develop and encourage the creative resource potential of each individual.

Practically all educational systems in the world face the challenge of developing the creativity of students and teachers. Some of the authors and experts in the field of education criticize the education systems, considering that they suppress creativity, pupils and students being in a situation to produce and reproduce results, rather than to think and develop their creativity. These types of research and arguments force the developed countries of the world to take serious steps to change educational strategies and policies.

For the purpose of elucidating our subject, apart from the introduction, research methodology framework, conclusions and references, we have organized the main findings of our research into 2 sections, examining the evolution of approaches to the development of the resource of creativity within the educational system, and comparatively analysing various national educational systems for the development of creativity resource. At the end of the article, conclusions were formulated.

## **2. Methodology**

The literature consulted in the research included sources providing the historical background of education systems in various countries, outlining the components of these systems as well as regulatory policies. We also focused on research that analyses the concept of creativity resource.

We have explored both theoretical sources and empirical evidence in our attempt to clarify the circumstances under which educational systems contribute to the development of the resource of creativity. In this sense, we capitalized on theoretical-structural approaches such as analysis-synthesis, and theoretical-logical approaches including the method of inference, the method of analogy, logical deduction.

Based on empirical evidence, we conceptualized the notion of the country's educational system. We conducted a quantitative and qualitative analysis to reveal the trends in the evolution of the educational systems of the countries of the world.

Furthermore, we have relied on the systemic approach, in our endeavour to expose the current and potential impact of the educational systems on the development of creativity resource.

## **3. Main findings**

### **3.1 Evolution of approaches to the development of the resource of creativity within the educational system**

In the context of technological and economic progress, the countries of the world have witnessed the growth of jobs considered "creative" and the increase of creative components in jobs previously considered "routine" or "mechanical". This trend has a considerable impact on social welfare, education systems and policies for the development and retention of human capital [2].

Research into the concept of creativity has expanded over time. In the 1980s, the American psychologist F. Barron identified creativity as including the willingness to take risks, entrepreneurship, creating new things [5]. In his view, the creative process was characterized by originality, consistency, validity and appropriateness to the task at hand. Frank Barron believed that “creative people are particularly observant and, much more than other people, are able to judge more accurately what they observe” [5].

The famous psychiatrist and artist Carl Jung held that we may “think of the creative process as a living thing implanted in the human psyche” [3]. He also showed that creativity is divided into two types: psychological and visionary. The first is responsible for the functioning of consciousness. The second expresses the primordial images of the unconscious. The existence of conscious and unconscious components in the creative process means the ability to express ideas coming from the unconscious. This is supposed to be the pathway of the human creative process [3].

A quality educational process keeps pupils and students interested in the subject. Modern education should not only support cognitive interest, but also stimulate creativity of pupils / students. Creativity develops in the course of creative activity, whilst a child/student experiences a whole range of positive emotions, both from the activity itself and from its outcome .

As we showed earlier [1], human creativity is a phenomenon felt more frequently as human resource transforms into human capital and later into creative human capital. In its turn “personalization could be considered a tenet of human resource conversion into human capital” [1]. Furthermore, as mentioned previously [1] “the process of human element turmoil ensures the dynamic necessary for the development of human personality, implicitly the dynamic of human capital, which apparently thus acquires the tendency to transform into creative human capital. Hence, not the mere accumulation of human capital, but the sustained dynamic of its substantiation, seems to us another central tenet explaining the formation of creative human capital” [1].

Sir Ken Robinson was an emblematic personality, promoter of creativity development in the educational system of Great Britain, but also in the systems of other countries. According to him, it is abnormal that every education system on earth has the same hierarchy of subjects. At the top are mathematics and languages, then the humanities, and at the bottom are the arts. Additionally, there is a hierarchy within the arts: art and music are normally given a higher status in schools than drama and dance. In the view of Ken Robinson “There isn't an education system on the planet that teaches dance every day to children the way we teach them mathematics. I think math is very important, but so is dance. Children dance all the time if they're allowed to” [7].

Simultaneously, Ken Robinson held that people think about the world in all the ways they experience it. “We think visually, we think in sound, we think kinesthetically. We think in abstract terms; we think in movement” [7]. Furthermore, according to him “intelligence is wonderfully interactive. The brain isn't divided into compartments. In fact, creativity, which could be defined as the process of having original ideas that have value – more often than not comes about through the interaction of different disciplinary ways of seeing things” [7].

On the other side, in Ken Robinson's view, educational systems often stifle creativity by criticizing and condemning student failures/mistakes. “They (children) are not frightened of being wrong. I don't mean to say that being wrong is the same thing as being creative. What we do know is, if you're not prepared to be wrong, you'll never come up with anything original. And by the time they get to be adults, most kids have lost that capacity. They have become frightened of being wrong” [7]. We believe that this is a big problem related to the historical legacy of the educational systems of the ex-Soviet countries, including the Republic of Moldova. Or, as Ken Robinson put it “We stigmatize mistakes. And we're now running national education systems where mistakes are the worst thing you can make. And the result is that we are educating people out of their creative capacities” [7].

### **3.2 Comparative approach of various national educational systems for the development of creativity resource**

As mentioned earlier [1], the process of globalization fosters creativity through greater openness and exposure, whereas creativity enhances global competitiveness at the level of individuals, companies, countries. However, in practice, “the confinements of the knowledge economy should be considered such as its low inclusiveness, marginalization of specific social groups and certain countries like Republic of Moldova, which face an increase in both the risks and opportunities related to their human capital” [1]. As concluded previously “the ability of these countries to preserve human capital at home is proportional to their investments in valorizing this capital, also through their educational systems, which besides, have to be adapted via fostering creativity within the teaching-learning process” [1].

Overall, the level of performance of the country's educational system, including its contribution to nurturing human creativity resource, depends on the level of economic development of the country.

Thus, the educational system of USA attracts the attention of many specialists. While it ranks high on the world stage, this country still shows great concern for education. In a revealing speech delivered at an annual meeting of the American National Academy of Sciences, President Barack Obama mentioned that science is needed more than ever, and that a country that is ahead today in educational sector will be ahead tomorrow in all the other areas. [10]

Unlike European education, where the entire course of study is strictly set by educational standards at the state level, American education is characterized by decentralization. On the one hand, each state in USA has the right to organize education independently, as long as it does not infringe on the constitutional rights of students, which ensures flexibility and adaptability of the education system at national level, but at the same time introduces inequalities in the final level of education of students, which differs from state to state [10].

In the USA, where economic modernization is a powerful engine of the country's development, the task of realizing the creative potential of society in order to maintain and strengthen its dominant position in the global space has become particularly relevant in the last decade, on the wave of scientific, technological and economic progress of the countries of Southeast Asia. In this context, A. Parker, former Assistant Secretary of Labor of the United States, noted that one of the main goals of the country's educational system is "to prepare

children for life in the XXI century, so that they can control the forces of globalization, the rapidly progressing development of new technologies, demographic and social shifts, which have become the reality of today"[10].

The US has its own vision and strategy for fostering creativity in education. The key thrust of this strategy is to expand the teaching of the arts and humanities at all educational levels. The concept of "humanities" is defined starting from the formulation given in the National Endowment for the Arts and Humanities Act of 1965: "The term 'humanities' includes but is not limited to the study of the following fields of knowledge: languages, both modern and classical; linguistics; literature; history; jurisprudence; philosophy; archaeology; comparative religion; ethics; history and art theory; those aspects of the social sciences which have humanistic content and operate with humanistic methods; and the study and application of humanistic knowledge in the context of social development, with particular emphasis on reflection on our diverse heritage and traditions" [10]. And if today the humanitarian content of educational programs does not seem something innovative, introducing in them the mastering the basics of visual and performing arts in them is certainly a significant step in the development of creativity in education [10].

Denmark is pioneering approaches to digital transformation and design-led solutions for a more equitable and sustainable economy and society. Creative Denmark is developing programmes across digitalization, innovation, quality of life and sustainability. It is invigorating cross-sector and public private partnerships to embed creative practice across the economy. A central pillar is design, which is viewed as a relative strength in Denmark, pivotal for sustainable development. [9]

Finland is catalyzing its digital and design sectors to drive value across the economy. Creative Finland is activating synergies between the creative industries and wider cultural sector – such as via the project “From Stories to Games”, which seeks to open-up museums’ cultural heritage content for use in the gaming industry. Creative Finland is also investing in activities which connect creative and cultural enterprises to partners in technology and health [9].

Creative Ireland is a five-year programme built around key themes: Creative Youth, Creative Communities, Creative Places, Creative Nation. It is an ‘all-of-government’ culture and wellbeing programme which aims to inspire and transform people, places and communities through creativity. Its portfolio includes a creative climate action toolkit, a focus on creativity for ageing populations, multiple interventions to enhance health and wellbeing through access to creative resources and activities, and a big push for creative technology as a driver of wellbeing. Creative Ireland also invests in place-based approaches, including a focus on micro enterprises and their role in the local economy [9].

In Iceland, the creative industries are supported by a consortium of agencies, including Business Iceland, providing investment and business support; Icelandic Music, which is facilitating music export opportunities for Icelandic talent; Creative In Iceland, which promotes Iceland as a place for cultural tourism and creative industries inward investment; Record In Iceland, and a network of cultural centers (with specialisms in literature, film and visual arts), and professional networks working together. The natural environment and environmental responsibility feature across all areas of creative economy development [9].

In Norway, Arts Council Norway and Innovation Norway are re-thinking their collaboration model to ensure the cultural and creative industries benefit from access to R&D investment, that micro-enterprises and freelancers have a more secure role in the wider creative economy, and that state-funded cultural institutions are able to diversify income streams and embrace digital technologies. Arts Council Norway favors a 'cultural and creative ecosystem' approach, recognizing the creative economy is driven by micro- enterprises and freelancers and that growth is likely to come through raised productivity across such firms. Inclusive talent development and growth provides people from all backgrounds and parts of the country have the opportunity to develop sustainable careers in the cultural and creative industries. [9]

There are large-scale diversified programs in Great Britain. Projects in various regions of the Great Britain are funded by the government and patronized by the National Advisory Committee on Creative Education, established in 1998. Among them are initiatives such as: "Creative Partnerships" in England, "Creative Youth Partnership" in Northern Ireland, "Creativity Matters, "Teaching and Learning for the Future" in Scotland [11]. Naturally, a large part of these projects is related to improving teacher education and engaging teachers in the implementation of a creative approach to pedagogical practice. Some of programs are implemented in universities: specially designed modules on creative education at the University of Leeds (The Fryer creative education programs); courses in creativity at the Open University, which were originally developed for educational MBA programs but can now also be included in teacher education curricula (MA in education, MA in open and distance education); a block related to the study of creativity and its development in the learning process is included in the postgraduate programs of Durham University. [11]

The British government has set for its education system "the ambitious but achievable task of turning the country into a world center of creativity"[6] On the basis of successfully tested educational technologies promoting the development of creative abilities of pupils and students, a creativity strategy in education is expected, focusing on the personal development of young people to prepare them for life in the new century.

Also, other European countries have accumulated rich experience of developing students' creativity, with the setting of a special educational environment that allows the individuality of each student to be revealed. The French Ecole de Roches, created almost two centuries ago, can serve as an example. [11]

In regard to Japan, two approaches to creative education coexist. One of them is oriented to the North American scientific school of creativity, being focused on stimulation of the ability to invent and discover. The other approach is based on the traditional Japanese philosophy of knowledge. According to the latter, national and cultural traditions are the most important factor in the formation of educational strategy. In this respect, a rich experience of developing the creativity of young people in the country has been accumulated, with the preservation of the traditional educational paradigm in the conditions of educational globalization and the offensive of Western values. At the same time, for many decades, Japan has held leading positions in the field of high technologies. [8].

Tatsuno, in his book symbolically titled "Created in Japan: from Imitators to World-Class Innovators" [8] notes that, unlike the spontaneous, idea-generating creativity of Americans, the Japanese focus on improvement, reworking, maximum efficient use of what they own. However, the Japanese can achieve the highest levels of creativity and invention while remaining rooted in their traditional culture.

The strategy of creativity in education is thus based on cultivating the style of learning that has developed in Japan over thousands of years and that is characterized by early inclusion in cognitive activities, contemplation, use of intuition, imaginative thinking, and empirical experience. Another feature of Japanese education, which contributes to the continuous creative development of the individual, is the cult of learning, which persists throughout life and is expressed in intensive in-house training programs, in learning at home, and in everyday life [8].

In the context of the strict regulation of the educational process inherent in the Japanese educational system, which includes ministerial control over the content of education as well as the forms and methods of teaching, few educational institutions in the country have curricula designed specifically for the development of students' creativity. As for schools, these are mostly educational institutions attached to universities that conduct research on creative development (Shitsuoka University works with two elementary schools and three high schools). Creativity education programs are more widespread at the level of secondary and higher (including pedagogical) professional education. More than fifty technological schools constantly organize creative courses and competitions on inventions in the field of robotics, the use of solar energy, computer programming, etc. At Toyo, Musashi, and Shitsuoka Universities, the educational programs for teacher training are expanded to include special courses on the theory of creativity and methods of its development [8].

The interest in the improved educational system is so high that the regional and EU structures offer strategic levers through targeted projects to increase the quality, so as the EU Cradle project developed a new creative teaching methodology for primary schools and employed a cross-curricular, activity-based, student-centred, exploratory teaching and learning approach, focusing on the simultaneous development of foreign language and entrepreneurial skills among young pupils aged 8-12. The implementation of the methodology increases the benefits of transporting the acquired skills into secondary school and, ultimately, beyond school boundaries into the pre-professional world, thus the pupils work and learn in a linear four-step process inspired by "Design Thinking" with problem-solving and designing solutions in mind. [11]

The high ambitious agenda based on the conviction that "all children and young people can be creative and should have opportunities for creative development regardless of race, gender or special educational needs, presupposes that the role is given to educational institutions, for which it is important to realize the importance and advantages of the creative approach, because the development of imagination, purposefulness, individuality of students will motivate them to educational activities. [11]

**Conclusions.** The authors considered some of the approaches related to development and importance of creativity resource in the context of the educational system of various countries, as

it is very wide, however one thing is certain and definite - the efforts made in different countries in the context of different educational systems are aimed at personalities, so to manifest creativity, interest, improvisation, trust, courage and autonomy that will generate creative entrepreneurship and thus sustainable economic development.

It becomes obvious the need to create within the educational systems the very concrete goals and main objectives for a creative education strategy and core measures and institutional mapping that ulterior will help to build a competitive economy and an open society by providing opportunities for the formation of an individual educational route, the disclosure of the creative potential of the individual in order to achieve the self realization, to achieve the highest quality of educational standards.

The need of modern schools and educational institutions for creative strategies implemented will facilitate increase number of creative people capable of thinking creatively, making non-standard decisions.

To facilitate the processes, the governments of each country, which sees their country in a better future, will involve the relevant resort ministries to complicate and develop programs to this end. The academic and entrepreneurial world can also get involved and contribute to the realization of this mission and vision.

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