

## TRENDS IN THE 21st CENTURY EDUCATION

Vali ILIE, Ph.D.

Teacher Training Department, University of Craiova  
[brainstorming71@yahoo.com](mailto:brainstorming71@yahoo.com)

ORCID: <http://orcid.org/0000-002-5354-4787>

**Abstract:** *The implementation of new information technologies is considered one of the most important problems at the beginning of this century. This enterprise involves the introduction of computers and gadgets into education and requires the use of modern methods and techniques. In both developed and developing countries, young people are increasingly dependent on technology. Employers are beginning to demand new competencies in order to increase competitiveness in a global market. Entrepreneurial skills are considered key competencies, and entrepreneurship education prepares people to be responsible and enterprising people. Intercultural education is the answer to cultural diversity, in a connected and multicultural world. All the contents of education are important, but we believe that the emphasis should fall on these three dimensions: digital education, entrepreneurship education and intercultural education. Meant to observe, the present research aims to identify the main directions in the field of education, to present the ways of adapting to the new social conditions and to highlight the difficulties encountered in this endeavour. The purpose of this study is to highlight the main aspects of education that are specific for the beginning of the 21st century. The reform of education requires more than a list of competencies. It requires a radiography of the problems faced by education, a listing of its vulnerabilities and, depending on the specific of the current society, establishing certain clear directions of action.*

**Keywords:** *education; digitalization; entrepreneurship; intercultural*

### **Introduction**

The 21st century is an era of innovations, scientific discoveries and exploitation of the creative potential in all fields of knowledge and in all dimensions of the social sphere. The more complex the world becomes, the

more education matters in the equation that includes research, economics and social relations. New horizons seem to create new challenges and we wonder if humanity is ready to make a leap in its evolution. Identifying some of the landmarks of the "history of the future" and trying to outline the profile of Homo Deus, Y. N. Harari asks: "If we really keep hunger, plagues and war under control, what will take their place at the top of the humanity's agenda? Like firefighters in a world without fire, in the 21st century humanity must ask an unprecedented question: what will we do with ourselves? In a healthy, prosperous and harmonious world, what exactly will our attention and ingenuity require?" (Harari, 2018, p. 10).

The Z (the first generation of digital natives – iGeneration or i-Pod) and Alpha (the generation of those born after 2010, connected to an interactive audio-video and kinesthetic environment) generations are the most connected in history. Their representatives meet people from all over the world online and they can easily make friends from anywhere on the planet, even before completing the compulsory studies. The competencies required from the pupils and students of the 21st century are both interdisciplinary and transdisciplinary, reconfiguring the set of knowledge they need, but also the attitudes and capabilities, the skills necessary for their professional integration in an ever changing world. In today's world, information is growing at a rapid pace so that no one can learn everything about a topic. In addition, what may seem true today, tomorrow may be false. Therefore, students need to "learn how to learn", that is to process, to analyse, to create in new situations and contexts, so that the skills they form could help them to adapt to the environment, in relation to different demands.

The social and technological changes have influenced the way we see childhood. Compared to previous generations, children and young people have a harder word to say in family decisions, they are more accustomed to being in the spotlight, expressing themselves freely, critically approaching situations, events, ideas. When asked "Are children today different from what they used to be?" the answer is based on studies published in recent decades. They compared the physical, cognitive and psychosocial characteristics of children and adolescents from different generations and identified a number of changes (Valkenburg & Taylor Piotrowski, 2018, pp. 32-36): early puberty, increased intelligence, more self-esteem and self-awareness, but also a higher degree of narcissism and behavioural problems (such as hyperkinetic disorder with attention deficit and anxiety).

Children, young people and adults are assaulted by the multitude of news, rumours, fake news, information more or less relevant to their evolution. Media has a great influence today in society. Being one of the main mass media means of information, television has become a partner of

the family members, a vital element of family life, monopolizing communication with the outside world or replacing other sources of information. The cultivation theory, launched by the American sociologist G. Gerbner in the late 1960s, focuses on the fact that television and the other types of media cultivate so much a common culture that they can blur the differences between the elite and the rest of the population: "People are born into a symbolic environment with television as its mainstream" (Gerbner, 1998, p. 180). Thus, media cultivates attitudes and values that are already present in a culture, it maintains and propagates it among the members of a culture. However, it should be emphasized that the nature and proportion of the media effects largely depend on the user's personality and the social context in which that particular medium is used (as shown by a study conducted by H. Cantril, a psychologist at Princeton University).

In a world where dogmas fall and the paradigm shift confuses human existence, we notice the diversity of opinions regarding education and the way we refer to school as an important factor in education. The 21st century school must reflect the specificity of its time: a changing world, rapid global transformations, acceleration of progress, openness to innovation, globalization and interculturality, digitization at the social level, facilitating access to resources through entrepreneurship. The various scenarios for a changing world relate during their development to the theme of education. The wave of changes and news that besieges the life of humanity has stressed the concerns for the study of the problems in the contemporary world. The syntagma of worldwide issues was proposed by the Club of Rome, represented by prestigious scientists who conducted prospective research and recommended general solutions to solve the crisis. The members of the Club of Rome offered scenarios for analyzing the problems of the contemporary world and stressed the need to prepare the human for the society of the future - a society of knowledge and conscience. Even if not all the reports have been officially approved, and some of them have critical reviews, they present a state of the system (Judge, 2018): "The Limits to Growth", 1972; "No Limits to Learning: Bridging the Human Gap", 1979; "The Barefoot Revolution", 1985; "The Scandal and the Shame: Poverty and Underdevelopment", 1995; "Governance in an Era of Globalization", 1999; "Rethinking Civilization: Resolving Conflict in the Human Family", 2006; "To Choose Our Future", 2015; "The Seneca Effect: Why Growth is Slow but Collapse is Rapid", 2017).

The reports of the Club of Rome are points of reference from which different bifurcations that outline frames in designing a map of the future start. The map of the future is based on education and work, seen as activities that are carried out throughout our life, conceived as continuous processes: "It is thus created a new framework for the development of the individual's

life, who has ahead of him compact work sequences alternating with educational ones. Such a revolution requires a change in social conceptions, legislation and institutions. It brings to society new solutions in the use of the labor force, in the lives of women, in the organization of social assistance and in specifying the role of the state and the responsibilities of the individuals” (Malița, 2001, p. 242).

### **1. Methodical benchmarks: finalities, principles, strategies**

Mapping the social dynamics is the basis of the geomodern project and contributes to finding a path to the education that is characteristic of the 21st century. Between the axiological and the social approach, education must include both values and facts, concrete results. If the facts highlight the praxiological dimension, the values are the benchmarks of the human model ordered by the society. It takes the form of the educational ideal (of philosophical source), which expresses the type of desirable personality. The educational ideal is the category with the highest degree of generality, it expresses the social function of education and learning system being translated through pedagogical goals and objectives.

The purpose of education reflects the level of economic and cultural development of the society and translates the projective model of personality towards which the society tends (the free, total and harmonious development of the human individuality, the formation of autonomous and creative personality, which should develop its entrepreneurial and civic spirit, for social inclusion, for achieving equal opportunities and for integration in the labour market). The technological advance will determine people to be more creative and to differentiate themselves from robots and intelligent machines, with which they will compete on routine or cognitive tasks or jobs. On the other hand, the modern economy will demand new skills. In order to be competent, a person should be able to interpret the situation in context, to have a repertoire of possible actions to be taken, and to have been trained in the possible actions of the repertoire, if this is relevant.

At the level of education we consider important the following *directions*:

- Accessing the mechanisms and levers that are necessary to succeed in a modern and globalized world;
- Personalizing education, an approach that will allow to reach the maximum potential of each person;
- Connecting with the community, in an analogous and digital way;
- Interacting with people from different cultures;
- Active, open and efficient communication with the other members of the company;
- Lifelong learning

The purpose of education is to ensure social order, to facilitate access to resources, to prepare for life, to train future citizens to face the challenges in the field of economy, health, environment, etc. The prospective character of education refers to anticipating the future of the school from a scientific perspective (the purpose of school is to teach people not to guess their future, but to decide it). In the second half of the last century, the objectives of prospective education were: to know how to lead, to collaborate, to adapt, to cultivate (Dottrens, Mialaret, Rast& Ray, 1970, pp. 11-20 ), to look far ahead, to look widely, comprehensively, to analyze in depth, to take risks, to think about man (Berger, 1973, p. 79), to learn how to learn, to learn how to live, to learn how to think freely and critically, to learn how to love the world and to make it more human, to learn how to be perfect in creative work (Faure, 1974, p. 119).

In this respect, the competencies of the 21st century are thought globally through openness and flexibility, collaboration and partnership. The European Reference Framework of Key Competencies for Lifelong Learning defined eight key competencies (European Commission, 2018, p. 8):

- Communication in the mother tongue;
- Communication in foreign languages;
- Mathematical competency and basic competencies in science and technology;
- Digital competency;
- Learning to learn;
- Social and civic competencies;
- Sense of initiative and entrepreneurship;
- Cultural awareness and expression.

By analysing the transition from the local community to the global community, from social cohesion to participatory democracy, from economic growth to human development, J. Delors emphasizes the need for lifelong education and identifies four pillars of knowledge (Delors, 2000): learning to know, to learn to do, to learn to live together with others and to learn to be. These main ideas (acquiring the tools of knowledge, interacting with the environment, cooperating with others in human activities and harmonious developing of each individual) are the basis of the educational principles specific to today's society.

*The principles* we consider to be 21st century education benchmarks are as follows:

1. The principle of making the connection among education, research and economics – so as to encourage innovation and ensure sustainable development.

2. The principle of ensuring the universal and global character of education – education should be a priority for all nations.

3. The principle of lifelong learning – in order to ensure the employability and valorize the potential of each member of society.

4. The principle of democratization of education – by ensuring equal opportunities.

5. The principle of promoting interculturality – through the exchange of good practices.

6. The principle of formation and development of the entrepreneurial spirit – in order to speculate on opportunities, to capitalize on professional opportunities.

7. The principle of balancing the classical and new dimensions/ sides of education – so as to achieve the development of the integral and harmonious personality.

8. The principle of technologization and digitization education – through online training and mobile devices that facilitate access to education.

9. The principle of achieving an attractive and efficient education, which will stimulate and motivate – by using modern strategies, adapted to the particular age and individual characteristics.

10. The principle of education based on collaboration – to stimulate communication between the actors/ factors of education in order to achieve common goals.

The way people experience education has changed over the centuries. Because an acceleration of change is being noticed, people need to adapt quickly and learn new things. "People want to learn, but they find traditional methods increasingly inefficient and unattractive; the contents are uninteresting and the institutions ever more bureaucratic. As a result, many turn to self-education at a time when it is becomingly increasingly easy to access vast stores of information" (Fundación de la InnovaciónBankinter, 2011, p. 24).

*The current educational strategies* are centred on active-participative methods, of a constructive and interactive nature, they capitalize on new technologies, support the digitization of education and combine a series of organizational forms (from the independent-individual or individual-supported, to the one in pairs, teams or groups - homogeneous or heterogeneous, up to the frontal one). Today, projects, creative exercises, simulations, problem solving, scenario imagining are preferred. Sound and video tapes, layouts, web pages, CD-Rom, experimental materials complete the picture of educational strategies.

Constructivist strategies promote the role of real, authentic search experience of understanding, of solving problems. On the other hand, and on the mental level, the use of different methodological possibilities that stimulate cognitive flexibility is encouraged. The strategies used in the construction of knowledge offer alternatives for asking questions, reflecting

on cognitive tasks, encouraging curiosity, taking risks in making choices. Strategies that integrate in a constructivist way the external conditions of learning are also exploited. The resort to situational learning uses multimedia and sends to simulation, modelling and cooperation. The scenario method causes the cognitive and even action or computer simulation of a real case-task to be solved. The strategies that integrate the internal conditions of learning bring forth motivation, mental processing of information and metacognition elements. Facilitating metacognition by asking questions reinforces the formative aspect of education while at the same time the methods can be optimized by appealing to intra- and interdisciplinary correlations, by making analogies, by finding relations, by suggesting new approaches, by reconstructing mental schemes, by affirming creativity.

## **2. Capitalizing on educational content**

### ***2.1. Digital education***

The computerization of education implies the use of the computer as an educational resource in order to reach the finalities of education. The online dialogues with specialists, the access to virtual libraries, the possibility of reading scientific articles are just some of the possibilities offered to those who want to be informed. The ICT potential encourages innovation in approaching teaching, learning and assessment and thus becomes an essential solution for the problems of the traditional educational environment.

The informatics revolution accompanies the cultural and technological revolution and facilitates the entry of modernity into a new phase (geomodernity). The educational process is deeply affected by the challenges of the digital age, and educational governance needs to be increasingly understood as digital educational governance. In recent years, digital technologies have been playing an increasing role in managing educational data and in organizing online classrooms and courses (e.g. Tapsott, 2009; Williamson, 2015; Elliot, 2017; Burns & Gottschalk, 2019).

Virtual education is an alternative to traditional educational environments. If in the past virtual education included distance learning, in the second decade of the twentieth century the concept expanded to online learning. The main positive aspects of virtual classroom training refer to: the elimination of geographical barriers, the possibility of recording teaching-learning-evaluation sessions, a more rigorous organization and faster transfer of a large volume of knowledge, the nuance of interactivity, ensuring closeness and flexibility, avoiding non-restriction, the existence of low costs, increasing the attractiveness of activities by accessing and using new technologies that are considered more attractive to learners.

Identifying the goals of a significant educational reform (independent learning, individualized learning, interactive learning, interdisciplinary

learning and intuitive learning), D. Barr says that the resources available through technology now include electronic databases with current information and independent research tools. These databases contain hyperlinks that allow interactive exploration and learning, in which inquiry, feedback and collaboration play important roles (Barr, 1990, pp. 84-86). Connectionist pedagogy emphasizes social presence and social capital by creating and supporting student networks: "In network contexts, members participate as they define real learning needs, filter these for relevance, and contribute in order to hone their knowledge creation and retrieval skills" (Anderson & Dron, 2011).

The sum of multiple literacies (e.g. information literacy, technology literacy, multimedia literacy), digital literacy makes the transition from print culture to digital culture. The digitally literate person interacts with technologies and knows how to search, select, evaluate information, exchange with colleagues, always using different web resources and tools. The digital competency is one of the eight categories of key competencies and refers to the safe and critical use of the entire range of digital technologies for information, communication and solving basic problems in all aspects of life.

The European digital competency framework for citizens identifies the key components of the digital competency (Carretero, Vuorikari & Punie, 2017, p. 21):

1. Competence area 1: Information and data literacy (1.1. Browsing, searching, filtering data, information and digital content; 1.2. Evaluating data, information and digital content; 1.3. Managing data, information and digital content);
2. Competence area 2: Communication and collaboration (2.1. Interacting through digital technologies; 2.2. Sharing through digital technologies; 2.3. Engaging in citizenship through digital technologies; 2.4. Collaborating through digital technologies; 2.5. Netiquette; 2.6. Managing digital identity);
3. Competence area 3: Digital content creation (3.1. Developing digital content; 3.2. Integrating and re-elaborating digital content; 3.3. Copyright and licences; 3.4. Programming);
4. Competence area 4: Safety (4.1. Protecting devices; 4.2. Protecting personal data and privacy; 4.3. Protecting health and well-being; 4.4. Protecting the environment);
5. Competence area 5: Problem solving (5.1. Solving technical problems; 5.2. Identifying needs and technological responses; 5.3. Creatively using digital technologies; 5.4. Identifying digital competence gaps).

The expectations of the society and the educated have changed quite a lot in recent years, and the digital environment favours the formation of new skills for students. We consider that the educational software available in the virtual environment provides the necessary means for an authentic education, in accordance with the demands of the information society. It is found that „the Net Generation uses digital technology in a very different way than boomers do. (...) Net Geners are transforming the Internet from a place where you mainly find information to a place where you share information, collaborate on projects of mutual interest, and create new ways to solve some of our most pressing problems. (...) In this way, the Net Generation is democratizing the creation of content, and this new paradigm of communication will have a revolutionary impact on everything it touches – from music and movies, to political life, business, and education” (Tapscott, 2009, p. 57).

## ***2.2. The entrepreneurial education***

Built on individual activity, entrepreneurship education plays an important role in social development. With its focus on the term of entrepreneurship, it aims at planning and making changes, at the efficient use of resources, at developing human networks, at making rational decisions, at rewarding initiators for the newly created value. It is considered that "a special kind of human skill is called entrepreneurial ability – that rare talent required to dream up a new product or finding a better way to produce an existing one. The entrepreneur tries to discover and act on profitable opportunities by hiring resources and assuming the risk of business success or failure" (McEachern, 1997, pp. 2-3).

A recent approach, with implications in the educational field, too, is the creation of charitable organizations, which are designed to support and support themselves, to provide social assistance (social entrepreneurship). Unlike economic entrepreneurs, social entrepreneurs focus on the social mission and the impact of it. Increasing the importance of the economic dimension of the company and reconsidering the creative act of the productive activity demands the need to train young people in market economic practices, by which they learn how to take risks, how to speculate on the opportunities to make the best decision, to have availability in developing business and establish partnership relationships in order to improve the quality of life. In our attempt to teach young people how to deal with complex relationships, we need a better connection of the curriculum to current and future socio-economic problems.

Within the most prestigious universities in the world (MIT, Stanford University, University of Cambridge), at the initiative of a group of

emerging leaders, there has been developed in recent years, an entrepreneurial agenda which contains, among others, ideas on how to manage a transformation process and how to lead to a model with entrepreneurial characteristics. The most common models of entrepreneurship implementation and capitalization in universities are the following (Graham, 2014):

a) *Model A* ("bottom up"): it is driven by the community, triggered by the desire to stimulate regional/ national growth (thus creating jobs for graduates, research opportunities and wider university support paths), taken over and developed by students and entrepreneurs from the regional economy (the investment is focused on the regional capacity and not the institutional one); this model seems to be more strongly associated with external financing, often related to the government (with many activities operating outside the university itself, the model may encounter difficulties when the university tries to regulate and institutionalize its entrepreneurial profile).

a) *Model B* ("top to bottom"): it is run by the university, which works through established university structures and it is triggered by the desire to make income from university research; often based on the established university research assets, this model offers a robust and fully institutionalized approach (however, such a model risks to marginalize the entrepreneurship determined by students and graduates, and the integration with the regional entrepreneurial community is often very limited).

A. Gibb (2012) and M. I. Salem (2014) describe the entrepreneurial universities as entities that offer environments, cultures, practices and opportunities suitable for encouraging and embracing the entrepreneurship of students and graduates, as well as creating synergy between the activities already existing in the institution. According to tradition, universities are not entrepreneurial, but they can become nurseries for new companies and for different related activities. In America, entrepreneurship education has been introduced in the University since 1947 (Harvard), but it did not become a force in business schools before 1970 (Kuratko, 2005, p. 581). In China, many universities have their own "nurseries" for students who want to start entrepreneurship. "The entrepreneurship education content of Chinese universities is mainly made up of entrepreneurship courses and entrepreneurial practice activities. With regard to the entrepreneurship course, it does not draw much attention in entrepreneurship education and its course setup remains at preliminary stage, lacking systematization and standardization. Many universities and colleges are keen on entrepreneurial activities and practice, whereas entrepreneurship course setup is restricted to employment guidance and career planning" (Yanhong&Yibin, 2012, p. 2). Entrepreneurial education has started to spread into more and more countries

of the European Union. In some educational systems, entrepreneurial education represents a systematic effort, but it is necessary to combine efforts to implement the specific contents and strategies into the school curriculum. In Germany, the relationship between the University and industry is not a new phenomenon, and the influence is mutual. On the one hand, companies can have access not only to top technologies, but also to the training of students and teachers (...). On the other hand, universities can increase their financial resources and effectively ensure the connection with the practice, capitalizing in practice what the students have learned (Chakrabarti & Rice, 2003, pp. 3-11).

In recent years there has been a need to include entrepreneurship education in university programs, especially for those with an economic profile. Quality education and practical training (entrepreneurial training) are crucial ingredients for the efficiency of economy in the knowledge-based society. School organizations are the ones that produce learning and also the ones that learn. They learn to adapt to changes, to structure their curriculum according to social requirements, to prepare for sustainable development. The most important way to teach entrepreneurship is to involve students in projects and practical activities, in which real experience is gained and entrepreneurial skills are formed.

**Table 1.** Entrepreneurial competencies

<i>General competencies</i>	<i>Specific competencies</i>
1. The implementation of innovations	1.1. Stimulating creativity 1.2. Using technology 1.3. Valorising the context
2. Risk taking	2.1. Appreciation from different perspectives 2.2. Using errors to understand the process 2.3. Assuming responsibility in making specific decisions for different situations
3. The speculation of opportunities	3.1. Offering various points of representation, perspectives on learning content 3.2. Providing an experiential learning environment that can facilitate meaningful exploration
4. Proactive orientation	4.1. Exchanging experience 4.2. Using the Internet in its own activity

An overview of entrepreneurial competencies allows us to say that openness to innovation, curiosity to research and discover new things, permanent improvement of the instructive-educational activity by adapting it to the demands of the labour market are just some of the characteristics required in the 21st century.

### ***2.3. Intercultural education***

Intercultural education starts from the concept of culture, which represents an oriented, progressive process, subject to continuity and discontinuity, to changes in quantity and quality. Modern culture predisposes the individual to another way of relating and acquiring knowledge, the Aristotelian knowledge, based on certain data, leaving room for random knowledge.

The phrase multicultural education is sometimes criticized for not covering the significance of the democratic society and relates more to the static version of cultural understanding. But multicultural education is by definition expansive: it refers to all students, it is for all students, without distinction of linguistic, ethnic, religious, racial or class appurtenance. K. T. Henson addresses the issue of multiculturalism with reference to the attitudes of teachers and teaching-learning practices that support the academic and social success of members from all cultures: "Multiculturalism recognizes that each student has his or her own inheritance and the right to this inheritance. Multiculturalism recognizes that although there are different cultures and languages, there must be equal opportunities for success in the class of students, and teachers must make special efforts to accommodate members of diverse cultures" (Henson, 2004, p. 4).

Starting from the cultural heterogeneity of the school population and society, as a whole, on the basis of race, ethnicity, religion, gender, social class, etc., the educational activities proposed by the school must enhance the cultural diversity. Valuing diversity should be one of the goals of the current curriculum. By analogy with biodiversity, which is considered to be essential for the existence of life on earth in the long term, it can be argued that cultural diversity can be vital for the survival of humanity in the long term. Multiculturalism and cultural diversity will have an impact on the global society; that is why multicultural issues should be incorporated into study programs.

An ideological option in democratic societies, intercultural education "aims to develop an education for all in the spirit of recognizing the differences that exist within the same society and, less (or not at all), an education for different cultures, which would imply staticism and an isolation of the cultural groups" (Dasen, Perregaux & Rey, 1999, p. 15).

There are two types of interculturality: official and unofficial. The first type includes academic programs that are developed within the school and not only (it promotes recognition and respect for different cultures). Within the minority groups the goals of education coincide with those of the majority, but it is desirable for them to learn how to live in the middle of the majority society, without losing their cultural identity. The second type has the same purpose, but the working methods and their operators are different. Those who deal with unofficial education work in youth information centres, youth clubs, volunteer-based centres, etc.

The intercultural competency is the ability to successfully communicate with people from other cultures. This consists in producing cognitive, affective and behavioural changes and includes a series of specific knowledge, skills and attitudes:

a) Knowledge: knowledge about the culture of one's own country and other countries; knowledge about interaction in society, between people from different cultures; knowledge about different cultural practices;

b) Capacities: interpreting a document or event specific to another culture; operating with knowledge in certain cultural contexts; adapting to intercultural situations; solving conflicts generated by misunderstanding of facts, events relating with people from different cultures;

c) Attitudes: curiosity, tolerance, cooperation, flexibility, empathy, openness, self-help.

In a globalized and multicultural world, the intercultural competency has become quite a popular concept. Before training and developing in students intercultural competencies, teachers must meditate on their own pedagogical practice. The increase of globalization on an economic scale brings changes in all spheres of human life: personal, social, cultural. The traditional models of belonging break down and come together to form new expressions of culture. Therefore, intercultural education invites us to reflect on our efforts to understand the world we live in.

### **3. Material and methods**

The research took place between November 1st, 2019 – January 31st, 2020 at the University of Craiova. The research sample consists of a number of 67 students from the Faculty of Sciences (the Department of Mathematics – 27 students, the Department of Computer Science – 16 students, the Department of Chemistry – 13 students and the Department of Physics – 11 students). The students who participated in the research are in their second year and they are attending the courses of the Module for psychopedagogical training made available by the Department for the Teaching Staff Training.

The problems generated by the changes that occurred in this century influence the conception about the role and functions of education, but especially the ways in which the educational process is carried out and the types of educational content. The questions we started from in our investigative approach are the following:

- What are the current priorities in the field of education?
- What types of competencies are specific to the knowledge society?
- What are the current problems of education?
- What impediments are there in the process of education reform on a global level?

The purpose of this study is to highlight the main aspects of specific education at the beginning of the 21st century. The objectives of the research are:

O1: the presentation of methodical benchmarks seen as a foundation in the realization of the education specific to the knowledge society;

O2: the identification of certain key, transversal competencies, that are characteristic of the needs and requirements of the current society;

O3: the list of current priorities in the field of education;

O4: the specification of the strategies to be followed in forming key competencies;

O5: the registration of possible dangers, difficulties, vulnerabilities - variables that impede or delay the implementation of education reform measures.

The method we used is the questionnaire. It includes the following items:

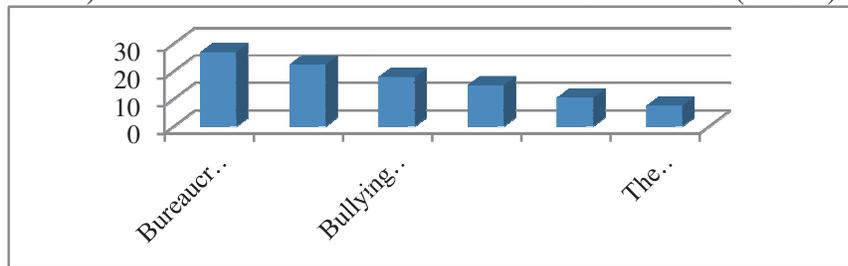
1. What are the major current issues in education? Choose one of these.
2. Which of the contents of education do you consider necessary to be emphasized?
  - a) Classical contents: intellectual education, moral education, aesthetic education, physical and sports education, technological education
  - b) Modern contents: intercultural education, digital education, entrepreneurial education
3. What strategies do you consider to be most important for training current competencies?
  - a) The strategies used in the construction of knowledge
  - b) The strategies that integrate, in a constructivist manner, the internal conditions of learning
  - c) The strategies that capitalize on the external learning environment
4. What are the main dangers or vulnerabilities that impede or delay the implementation of education reform measures? Choose one of these.
5. What proposals do you have to achieve a proficiency profile of the 21st century student?

The obtained answers were recorded, interpreted and presented in the subchapter of the research results. Based on them, we formulated the conclusions of our study and compared them to the theoretical aspects previously presented.

#### 4. Results

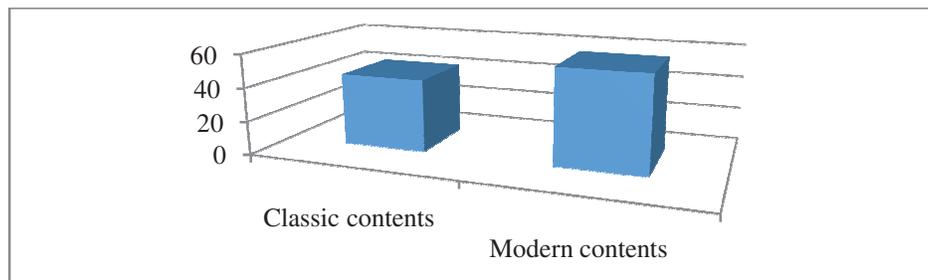
In item 1, the answers of the students were different. Among the most common are the following:

- a) Bureaucracy – 18 (26.87%);
- b) The lack of education funding – 15 (22.39%);
- c) Problems of discipline in the class of students (bullying in school) – 12 (17.91%);
- d) The lack of access to technology – 10 (14.93%);
- e) The teachers' training (in the specialized discipline, in the field of psychology and pedagogy and from a methodical point of view) – 7 (10.44%);
- f) The absence of motivation for the students – 5 (7.46%).



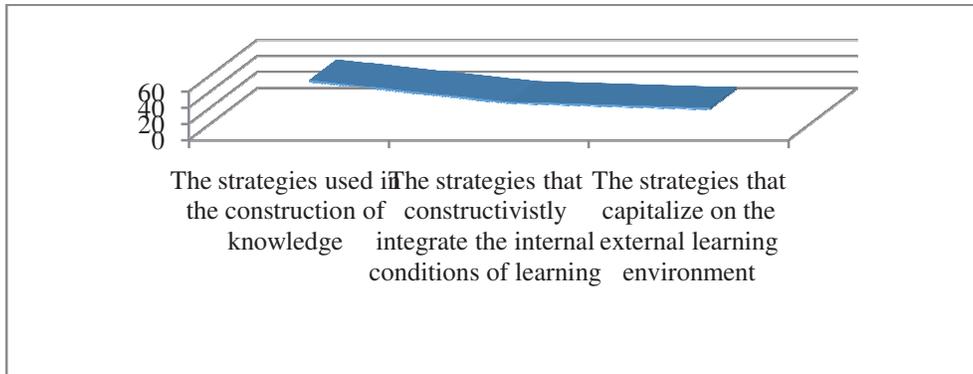
**Figure 1.** The recorded answers in relation to the current problems of education

The answers to item 2 highlight the contents that the students think should be emphasized: classic contents (29 students - 43.28%) and modern contents (38 students - 56.72%).



**Figure 2.** The choices of the students in relation to the contents of education

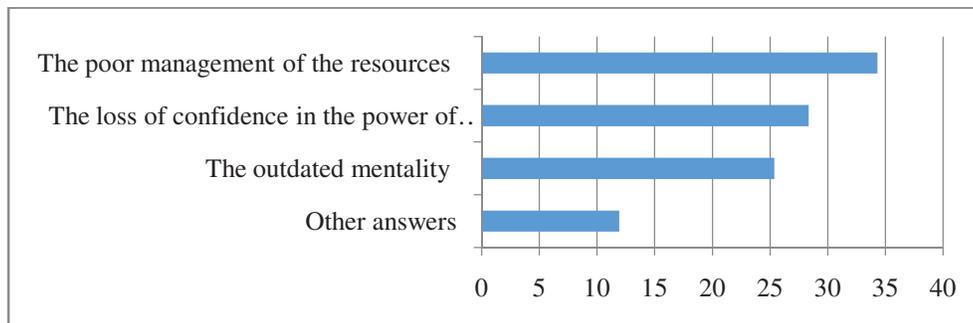
Item 3 aims to identify the types of educational strategies that students consider important for the process of training the competencies required in the knowledge society. Their choices are the following: the strategies used in the construction of knowledge – 36 students (53.73%), the strategies that constructivistly integrate the internal conditions of learning – 18 students (26.87%) and the strategies that capitalize on the external learning environment – 13 students (19.40%).



**Figure 3.** The options of the students in relation to the types of educational strategies

The answers given by the students to the question regarding the dangers/ vulnerabilities that prevent or delay the implementation of the education reform measures are hierarchized as follows:

- a) The poor management of the resources (material, technical, human, informational): 23 (34.33%);
- b) The loss of confidence in the power of education: 19 (28.36%);
- c) The outdated mentality (of human individuals – teachers, parents): 17 (25.37%);
- d) Other answers: 8 (11.94%).



**Figure 4.** The responses of the students to the item regarding the dangers or vulnerabilities

present in the implementation of the reform measures

In the last item we were interested in the proposals to make a proficiency profile of the 21st century student. These include:

- The ability to adapt to new and different situations, from different fields of knowledge or social life;
- The availability of giving time and energy to support the community and society as a whole;
- The desire for continuous learning and improvement;
- The ability to think critically, to question information, ideas, theories;
- The ability to work as a team, to collaborate;
- The ability to communicate openly with different people, from different backgrounds and cultures;
- The ability to creatively address problems that do not yet exist.

### **5. Discussions**

There are a number of problems facing education today. These include bureaucracy and the lack of funding or underfunding, as evidenced by the answers given to item 1 by the questioned students (49.26%). There is an interesting debate about what the representatives of management are doing and what they really should be doing in schools. It should be ensured that there is a quality material base, that all technical conditions are met and that the infrastructure works. Technology does not replace the fundamental aspects of education, but it only helps them to accomplish more easily, faster, in a personalized way, according to the needs of the students, the school, the community. This does not change the basic elements of education, but it is a new and current means of exploring, training and developing skills.

Item 2 balances the classical and modern contents. The latter are chosen in a higher percentage (56.72%) and include new content, specific to entrepreneurial education, digital education and intercultural education. Many students feel that what is learned in school should be related to industry and real social life. A better connection between the school and the industry can be achieved through entrepreneurial education. When real-life scenarios are brought into education, we can speak of authentic learning. Connecting students to concrete situations and real-life opportunities helps them become more interested, anchored in different situations and intercultural experiences (directly or through modern technology). The fact that 43.28% of the students surveyed opted for the classical contents shows that there is a balance between the contents and that the students think maturely and have an overview, understanding their importance. The particular contents of education join the new educations (included in the

education process in the second half of the last century) and it is based on the general contents of education.

The answers given to item 3 follow the students' options for the types of educational strategies. Out of the total number of students (67), 36 chose the strategies used to build knowledge. Over 53.73% give importance to the constructivist nature of understanding, the construction of the interpretations and arguments, the cognitive processing of information, the procedural facilities.

In item 4, the students were asked what are the dangers/ vulnerabilities that prevent or delay the implementation of the reform measures in education. The poor management of resources (34.33%) and the loss of confidence in the power of education (28.36%) are the most frequent answers, but students also reminded the out-dated mentality (11.94%), as a reflection of a society totally unprepared for the challenges of the 21st century. Reflecting on the complexity and ambiguities of real life is a challenge for both students and teachers, because education is a dynamic and adaptive system. The fact that it loses trust in its role is an alarm signal.

By analysing the answers given for item 5, we can establish the benchmarks of a proficiency profile of the 21st century students. The ability to adapt is important in a constantly changing world, and critical thinking and reflexivity help to produce innovations. In all fields of activity, creativity plays an important role, and communication, active participation, cooperation and support are elements of current professional competencies. The new technologies nuance the way people communicate with one another and reconfigure the picture of the competencies required by a new society. We need to think more as global citizens, teach students how to be responsible and learn more about the world they live in.

## **Conclusions**

Starting from different experiences and cultures, all interventions on the topic of education reach a common denominator. Education is the reflection of the society it is produced in, and the current context is new and challenging. Education for "today's world" means preparing young people for the age of technology and for the Internet.

Today, many educational systems around the world are still educating for the industrial society. We wonder if the specific skills of the 21st century are totally different from those of previous centuries. We believe that we should teach students to question all the information they receive, but not to doubt the power and beauty of human nature. One of the goals of education is to discover and understand both the outside and the inside world. Education must prepare for life, but also for integration into the socio-

professional life; therefore, it also has a social and economic purpose. From here, the role of training entrepreneurial skills, so necessary in a society that emphasizes innovation, results. Not less important is the cultural purpose, because education teaches us about our own culture (values, traditions, customs), about how to communicate with people from different cultures and how to bring together different experiences that can enrich us.

Education must develop students as human beings – stimulate creativity, generate joy in learning, maintain student curiosity and arouse interest in discovery and problem solving. In this way, children will be able to grow healthy, develop socio-emotionally, they will communicate openly and efficiently in an increasingly complex and sophisticated world of networks (human and digital).

### References:

Anderson, T., Dron, J. (2011). *Three Generations of Distance Education Pedagogy*. <http://www.irrodl.org/index.php/irrodl/article/view/890/1663>.

Barr, D. (1990). A solution in search of a problem: the role of technology in educational reform. *Journal for the Education of the Gifted*, 14, 79-95.

Berger, G. (1973). *Omul modern și educația sa*. București: EDP.

Burns, T., Gottschalk, F. (eds.). (2019). *Educating 21st Century Children: Emotional Well-being in the Digital Age*. Educational Research and Innovation, OECD Publishing, Paris. <https://doi.org/10.1787/b7f33425-en>.

Cantril, H. (2017). *The Invasion from Mars. A Study in the Psychology of Panic*. New York: Routledge.

Carretero, S., Vuorikari, R., Punie, Y. (2017). *DigComp 2.1. The Digital Competence Framework for Citizens With eight proficiency levels and examples of use*. <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1.pdf> (online).pdf.

Chakrabarti, A., Rice, M. (2003). *Changing Roles of Universities in Developing Entrepreneurial Regions: The Case of Finland and the US*. pp. 3-11. <http://web.mit.edu/ipc/publications/pdf/03-003.pdf>.

Dasen, P., Perregaux, C., Rey, M. (1999). *Educația interculturală. Experițe, politici, strategii*. Iași: Polirom.

Delors, J. (2000). *Comoara lăuntrică: raportul către UNESCO al Comisiei Internaționale pentru Educație în secolul XXI*. Iași: Editura Polirom.

Dottrens, R., Mialaret, G., Rast, E., Ray, M. (1970). *A educația a instrui*. București: EDP.

Elliott, S. (2017). *Computers and the Future of Skill Demand*, Educational Research and Innovation, OECD Publishing, Paris. <https://doi.org/10.1787/97892264284395-en>.

European Commission (2018). *Commission Staff Working Document. Accompanying the document. Proposal for a Council Recommendation on Key Competences for LifeLong Learning*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018SC0014&from=EN>.

Faure, E. (1974). *A învățasăfii*. București: EDP.

Fundación de la InnovaciónBankinter. (2011). *Education in the Twenty-First Century Commitment to the Future*. <https://www.fundacionbankinter.org/documents/20183/137550/Publicacion+PDF+IN+FTF+Educacion.pdf/aacb6b64-4352-46a5-bb4d-e72de7f819e0>.

Gerbner, G. (1998). Cultivation Analysis: An Overview. *Mass Communication & Society*, 1(3/4), 175-194.

Gibb, A. (2012). Exploring the synergistic potential in entrepreneurial university development: towards the building of a strategic framework. *Annals of Innovation and Entrepreneurship*, 3. <http://www.innovationandentrepreneurship.net/index.php/aie/article/view/16742>.

Graham, R. (2014). *Creating university-based entrepreneurial ecosystems evidence from emerging world leaders*. MIT Skoltech initiative.

Harari, Y. N. (2018). *Homo deus. Scurtăistorie a viitorului*. Iași:EdituraPolirom.

Henson, K. T. (2004). *Constructivist Teaching Strategies FOR DIVERSE MIDDLE-LEVEL CLASSROOMS*. Boston: Pearson Education.

Judge, A. (2018). *Club of Rome Reports and Bifurcations. A 50-year overview*. <https://www.laetusinpraesens.org/links/clubrome.php>.

Kuratko, F. D. (2005). *The Emergence of Entrepreneurship Education: Development, Trends and Challenges*, p. 581. Retrieved in [http://entepreneurship.okstate.edu/files/The\\_Emergence\\_of\\_Entrepreneurship\\_Education\\_Development\\_Trends\\_and\\_Challenges.pdf](http://entepreneurship.okstate.edu/files/The_Emergence_of_Entrepreneurship_Education_Development_Trends_and_Challenges.pdf).

Malița, M. (2001). *Zece mii de culturi, o singurăcivilizație. Spregeomodernitateasecolului XXI*. București: EdituraNemira.

McEachern, W. A. (1997). *Economisc. A Contemporary Introduction*. Fourth Edition, Cincinnati, Ohio: South-Western College Publishing.

Salem, M. I. (2014). Higher education as a pathway to entrepreneurship. *International Business and Economics Research Journal*, 13(2), 289-294.

Tapsott, D. (2009). *Grown up Digital. How the Net Generation is Changing your World*. McGraw Hill. [http://socium.ge/downloads/komunikaciisteoria/eng/Grown Up Digital - How the Net Generation Is Changing Your World \(Don Tapscott\).pdf](http://socium.ge/downloads/komunikaciisteoria/eng/Grown_Up_Digital_-_How_the_Net_Generation_Is_Changing_Your_World_(Don_Tapscott).pdf).

Valkenburg, P.M., Taylor Piotrowski, J. (2018). *Generațiadigitalășidependența de media*. București: Editura Niculescu.

Williamson, B. (2015). Digital education governance: An introduction. *European Educational Research Journal*. <https://journals.sagepub.com/doi/10.1177/1474904115616630>.

Yanhong, J., Yibin, L. (2012). The orientation of entrepreneurship education of China's Universities in the context of sustainable development. *Quality Research Centre*. Vol. 4, No. 1. [http://www.cedc.ro/media/MSD/Papers/Volume 4 no 1 2012/MSD\\_5.pdf](http://www.cedc.ro/media/MSD/Papers/Volume 4 no 1 2012/MSD_5.pdf).