

Education as a Basic Element of Intellectual Capital

A. V. Babaeva ^a, A. A. Borisova ^b and M. L. Khutornaya ^c

Voronezh State University of Engineering Technologies, Voronezh, Russia

Keywords: Intellectual Capital, Education, Universal Learning Activities.

Abstract: The article is dedicated to the problem of intellectual capital development in modern Russian society. Currently, many different studies are dedicated to this problem. But many questions related to the processes of development of intellectual capital in the society are still relevant. The article focuses on the problems of education. The authors consider education as a fundamental basis for intellectual capital. The classical paradigm of education has dominated European culture for about 300 years. The traditional educational paradigm was a kind of reflection of the organization of labor in early industrial production, and in order to maintain this paradigm, people must massively acquire knowledge and develop skills that are necessary in work. In recent decades, the world has been undergoing intensive processes of formation of a new educational paradigm, which is going to replace the classical one. Changes in the educational architecture of society are associated with the search for the most adequate models of education, which allows us to form the necessary personal qualities of a digital society. Special attention in the new education architecture was paid to school education. The foundations of creative thinking are laid in the process of schooling and a person receives the basis, which provides the expansion and growth of the intellectual capital of society. The article highlights the main processes taking place within the framework of Russian school education. Advantages and disadvantages of these processes are shown. The article notes that the Russian education system still faces the task of finding ways to combine the foundations of modern science with the process of developing creative thinking. Active leisure activities become predominant in terms of limiting life expectancy and determine the rate of premature aging of the population.

1 INTRODUCTION

Phrases about the important role of intellectual capital for the development of society, about the fact that it is intellectual capital that makes it possible for breakthroughs in all spheres of human activity, have become usual. Having appeared back in 1969, the term "intellectual capital" has passed from economic doctrines to all social and humanitarian studies. The study of post-industrial society, and then digital civilization, showed that it is not physical labour that is the most important thing, but the intellectual, creative abilities of a person. It is something what O. Toffler called "symbolic capital".


The most active research on the phenomenon of intellectual capital begins after 1991, when L. Edvinsson developed a matrix called the Skandia


navigator, which can be used to measure the level of intellectual capital in an organization (Edvinsson, L. and Malone M. S., 1997). L. Edvinsson emphasized that intellectual capital is based on a set of knowledge that allows enterprises to develop dynamically.


Currently, there are many definitions of this phenomenon. Traditionally, intellectual capital is understood as "the totality of human assets, intellectual property, infrastructure and market assets" (Bruking E., 2001).

Intellectual capital was studied and is being studied both abroad and in our country. The most known authors are T. Styuart, 2007, L. Edvinsson and Malone, 1997; Edvinsson, 2000. E. Bruking, 2001, Y. Ruus, 2007, D. Gelbrejt, Dzhon Kennet, 2004, P.V. Bespolov, 2001, B.B. Leont'ev, 2002, and others.

But among the many aspects studied, there is one that, in our opinion, should be studied more closely.

^a  <https://orcid.org/0000-0001-6799-1513>

^b  <https://orcid.org/0000-0002-9149-2439>

^c  <https://orcid.org/0000-0001-6799-1513>

It is a question about the process of forming intellectual capital. What means can and should we use to form it, how can we not only maintain the obtained level, but also increase it, at what age we should start actively involve a person in the process of forming the main wealth of modern civilization.

2 RESEARCH METHODOLOGY

The theoretical and methodological basis of the research is the philosophical-anthropological and historical-cultural principles, as well as a systematic approach.

The study is of a theoretical nature, since it studies a phenomenon that needs to be more deeply understood, systematized and structured.

The research presented in this paper is based on the synthesis of these approaches

3 DISCUSSION OF RESULTS

Any socio-cultural transformation is a painful process, accompanied by the "trauma of transformation" according to the Polish sociologist of the twentieth century P. Stompka. The goals and values of the modern world have led to a change in the traditional meanings of human life and activity. In such conditions, the question of mechanisms that allow a person to accept innovations, to be involved in the ongoing processes, has become particularly acute. Possibly, that is why the 21st century started with proclamation of the need to transform existing models of education. In 2000, UNESCO presented a program in which education was to become "education for all". In recent decades, a special emphasis has been placed on the development of education all over the world. And this is not accidental, because gradually it became clear that it is the education system that allows you to form the qualities of a person necessary for the digital society.

Special attention in the new education architecture was paid to school education. The foundations of creative thinking are laid in the process of schooling and a person receives the basis, which provides the expansion and growth of the intellectual capital of society.

The classical paradigm of education has dominated European culture for about 300 years. The main emphasis of this paradigm was placed on the perception and memorization by students of ready-

made educational information that carries knowledge about the past, about situations of theoretical or practical action that have already been realized and require their own understanding. As Ya.A. Komensky wrote, it is unwise to tell the student something contradictory at the very beginning of the lesson, i.e. to raise doubts about the subject of the lesson. The student in such system was perceived as a "vessel" in which the teacher should contribute the necessary knowledge and skills. Direct control of the student's activities and the transfer of information from teacher to student are carried out within the traditional paradigm. The traditional educational paradigm was a kind of reflection of the organization of labor in early industrial production, and in order to maintain this paradigm, people must massively acquire knowledge and develop skills that are necessary in work. Moreover, the acquired knowledge was sufficient for the entire period of a person's working life.

The end of the 20th seriously changed all basic human ideas about the world. The idea that modern culture is acquiring the features of a "mosaic", where constant changes and transformations become a way of life, began to be heard more and more often (Matchin, 2017). A new type of rationality has been formed in modern culture. If classical rationality led thought through a series of rigidly connected concepts, stages, judgments, etc., then thought in modern culture moves along "random" trajectories. Associativity, according to K. Levi-Strauss, becomes the dominant feature of thinking. Moreover, modern culture is a culture of a dialogue, not a monologue. Since thinking is always personal, culture must inevitably include a variety of personality-oriented thoughts, each of which not only has the right to exist, but also acquires its own certainty only in relation to the same other thoughts, i.e. through dialogue.

Another interesting feature of modern culture can be noted: it is a culture focused on the present, a culture that lives a *recentiori* (from lat. *recens* - real, fresh). If for the culture of European society until the second half of the twentieth century, time was primarily a history of development along the path of progress, which was considered almost as unambiguously set, then modern culture focuses on the present. That is why modern culture is a culture that focused not on the benefit, but on the self-worth of a person as a uniqueness, as a person, as the only source of productive activity.

The modern world needs not just a fully developed personality, but a personality capable of constant purposeful self-development. A person is required to develop such qualities as systemic

scientific thinking, constructive imaginative thinking, developed imagination, spatial and associative thinking, developed intuition, variability of thinking, good linguistic training and proficiency in a language (or languages), which to the greatest extent provides (provide) opportunities of extensive human contacts.

The modern labor market has begun to actively introduce the principles of management from the sphere of activities of enterprises and organizations to the field of individual careers. At the end of the twentieth century, the concept of "self-management" appeared, which included the whole set of principles of management and development of personal abilities to achieve a certain career growth. For the first time, this concept is proposed and developed by P. Druker in his well-known work "Management Challenges for the 21st Century" (Druker, 2000).

In the twentieth century, a person did not need to know about the level of development of their intellectual and regulatory abilities. In the modern business world, successful or unsuccessful career growth largely depends on these abilities and the desire to develop them. Self-management offers a wide variety of technologies for determining individual abilities, the ability to plan and predict their activities. Analysis of the results allows you to see, which action led to the lack of effective use of abilities. Very often the reason for unsatisfactory results is not a lack of knowledge, but a lack of the ability to regulate activities. That is why, more and more often people talk about the need to form not a common specialist with only special knowledge and skills, but an employee who has realized his/her life purpose, who knows how to plan his/her activities, who has forecasting and design skills. In such a situation, the education system should not only transfer knowledge, but also teach students to regulate their activities.

Dissatisfaction with the classical paradigm of education, which has ceased to contribute to the development of the intellectual potential of society, has swept the whole world. The American poet John Ashbury expressed a rather figurative idea of the state of the classical educational paradigm and its role in society in his book "What is Poetry?": "All thoughts were weeded out at school. And the remains look like a field" (Ashbury, 1977).

In recent decades, the world has been undergoing intensive processes of formation of a new educational paradigm, which is going to replace the classical one. Fundamentally new accents are put in the "teacher-student" system within the new educational paradigm. The main goal is not to teach the sum of knowledge, but to teach ways of thinking, to develop

creative abilities, the ability to independently search for new ways to solve problems, to freely carry out activities in standard and non-standard situations. The modern education process, having expanded the ideas about the student, actively uses methods, the essence of which can be expressed by an aphorism, expressed by the teacher of the XIX century, A. Disterveg: "A bad teacher presents the truth, a good teacher teaches you to find it" (Disterveg, 1956). The skill of the teacher in the modern education system is not only the mastery of the method of presenting the material, but to a greater extent the skill of dialogue and personal communication. Back in the middle of the twentieth century, E.V. Il'enokv noted that "the school should teach thinking, and not just load the student's head with educational material" (Il'enokv, 1973).

The transition to a new educational paradigm in our country has found its expression in the adoption of new state standards of education. FSSES identified the main goal of modern school education - the formation of universal educational actions. In 2006, A.G. Asmolov and a group of researchers under his leadership developed a model of universal educational actions - a methodology for their formation and identified the types of universal educational actions that correspond to the main goals of the modern educational process.

Among the tasks set for modern Russian secondary education, the tasks of social and personal development of students have come to the fore. Social development includes the process of formation of Russian and civic identity. As A.G. Asmolov noted: "the current situation has made clear the urgency of the transition to a new strategy of education - the social construction of civic identity as a basic prerequisite for strengthening the state" (Asmolov, 2007).

It is not accidental that in modern Russian education this problem has become relevant. The state of axiological uncertainty in Russian society has a negative impact on the younger generation. For successful social development of the individual, it is proposed to increase attention to the main components of civic identity, such as cognitive, emotional, and behavioral, in the educational process.

The cognitive component of civic identity is primarily associated with ideas about belonging to a specific sociocultural community, expressed in knowledge of the basic laws of the Russian Federation, state symbols, major historical events. The creation of a single history textbook is one of the stages in the development of this component.

The emotional component is expressed in the education of love for the Motherland, patriotism, respect for the history of the country.

The behavioral component is manifested in the formation of a civil position in the activity, through participation in the socio-political life of the country.

Together with civic identity, the process of social development also includes the development of tolerance, the upbringing of patriotic convictions.

These tasks affect not only secondary, but also higher education.

Universal learning activities provide students with the opportunity for a broad orientation - both in various subject areas and in the structure of the learning activity itself, including students' awareness of its target orientation and value-semantic characteristics. "The logic of the development of universal educational actions, which helps the student to almost literally embrace the immensity, is based on the formula: from action to thought" (Asmolov, 2011).

Universal educational activities are not just a fashion statement, but an attempt to find an adequate response to the challenges of the modern civilizational process.

4 CONCLUSION

15 years have passed since the beginning of active transformations and we can note that Russian educational architecture is becoming more and more multivariate, aimed at meeting the needs of social and professional groups and individual spiritual needs. New pedagogical technologies have appeared and continue to appear. The process of education at all its levels includes activating teaching methods (game, modeling, the method of design and research activities, "inverted lesson", distance forms, etc.). A large number of educational platforms have appeared, which makes it possible to implement the ideology of building individual learning paths. The possibilities of implementing the idea of advanced education are considered.

But at the same time, many of the tasks set for education have not been implemented. Despite the innovations, we could not finally accept the basic position of modern education: "the teacher is not a translator of knowledge, he is a participant in the process of creative development of the personality" (Obrazovanie v interesah lyudej i planety). For the most part, we have remained within the framework of the traditional representation, which can be represented in the form of the following scheme (Figure 1).

The modern world requires a different principle of interaction within the educational space (Figure 2).

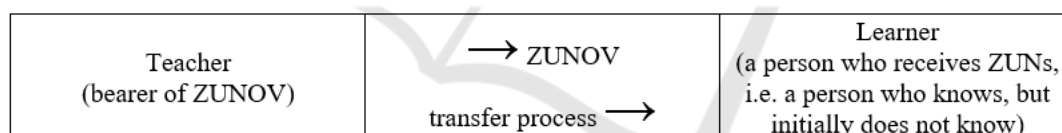


Figure 1: Basic scheme of traditional education.

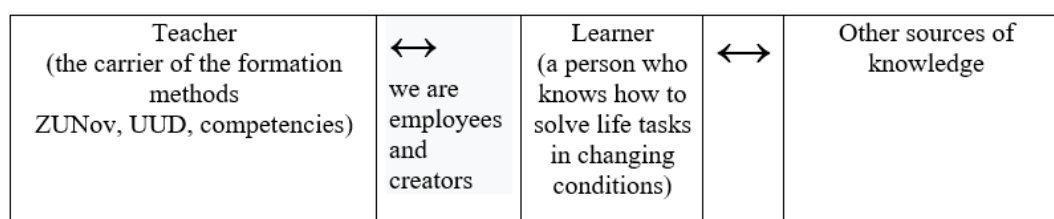


Figure 2: Innovative Scheme of Interaction within the Educational Space.

Back in the twentieth century, the Brazilian educator Paulo Freire, in his work "Pedagogy of the Oppressed", noted that "education suffers from the disease of narrative. Students do not perform an act of cognition, since the object in respect of which this act should be performed is, as it were, the property of the teacher, and not the object that mediates cognition

and awakens the teacher and students to critical analysis. Thus, under the guise of "preserving culture and knowledge", we have a system that does not contribute to the achievement of either genuine knowledge or genuine culture." (Frejre, 2018). As a result, an authoritarian space is created to suppress the creativity of students, which is still not overcome in

the end. Therefore, the domestic education system is still faced with the task of finding options for combining the foundations of modern science with the process of developing creative thinking. Only then can the active growth of intellectual capital in our society be possible.

REFERENCES

- Asmolov A.G.(2007). Kak budem zhit' dal'she? Social'nye efekty obrazovatel'noj politiki. *Lidery obrazovaniya*. 6:4-10.
- Bespolov P.V. (2007). *Intellektual'nyj kapital – strategicheskij potencia*, Social'nye otnosheniya.
- Bulyga R.P., Terina S.N. (2011). Koncepciya intellektual'nogo kapitala: struktura i klyuchevye pokazateli. *Auditorskie vedomosti*, 11: 3-13.
- Bruking E. (2001). *Intellektual'nyj kapital: klyuch k uspekhv v novom tysyacheletii*. SPb. Piter.
- Gelbrejt, Dzhon Kennet. (2004). *Novoe industrial'noe obshchestvo*, Moskva: AST; SPb. : Tranzitkniga.
- Disterveg F.A. (1956). *Izbrannye pedagogicheskie sochineniya*, M.: Uchpedgiz.
- Druker P. (2000)., *Zadachi menedzhmenta v XXI veke* M.
- Il'enokv E.V. (1973). Znanie i myshlenie. Uchitel'skaya gazeta.
- [http:// caute.net.ru/ ulyenkov/test/scientia.html](http://caute.net.ru/ulyenkov/test/scientia.html)
- Leont'ev B. B. (2002). *Cena intellekta. Intellektual'nyj kapital v rossijskom biznese*. Moskva.
- Matchin V. T. (2017). Neopredelennost' v informacionnom pole. *Perspektivy nauki i obrazovaniya*, 3 (27):7-13.
- Menedzhment intellektual'nogo kapitala. (2014) .M.: Omega.
- Obrazovanie v interesah lyudej i planety: postroenie ustojchivogo budushchego dlya vsekh. https://unesdoc.unesco.org/ark:/48223/pf0000245752_rus
- Ruus J., Pajk S, Fernstem L. (2007). *Intellektual'nyj kapital: praktika upravleniya*, SPb: Vysshaya shkola menedzhmenta SPbGU, 3nd edition.
- Styuart T.A. (2007). *Intellektual'nyj kapital. Novyj istochnik bogatstva organizacij*, M.: Pokolenie.
- Tis Dzh. (2004). Poluchenie ekonomicheskoy vygody ot znaniy kak aktivov: «novaya ekonomika», rynki noutu i nematerial'nye aktivy. *Rossijskij zhurnal menedzhmenta*, T. 2.(1): 95-120.
- Asmolov A.G., Burmenskaya G.V., Volodarskaya I.V., Karabanova O.A, Salmina N.G., Molchanov S.V. (2011). *Formirovanie universal'nyh uchebnyh dejstvij v osnovnoj shkole: ot dejstviya k mysli. Posobie dlya uchitelya*, M.: Prosveshchenie,,2nd edition.
- Frejre P. (2018). *Pedagogika ugnetennyh*, M.:OOO «Izdatel'skaya Gruppa «Azбука-Attikus». <http://litresp.ru/chitat/ru/freyre-paulu>
- Brooking A. (1997). The components of intellectual capital?: http://www.tbroker.co.uk/intellectual_capital/components.html.
- Edvinsson, L. and Malone M. S. (1997). *Intellectual Capital: Realizing your Company's True Value by Finding Its Hidden Brainpower*, Harper Business, New York, NY.
- Edvinsson L. (2000). Some perspectives on intangibles and intellectual capital. *Journal of Intellectual Capital*, 1.
- Petty R., Guthrie J. (2000). Intellectual Capital Literature Review. Measurement, reporting and management. *Journal of Intellectual Capital*, 2.
- Ashbery John. (1977). *What Is Poetry?* House boat Days: Poems. N.Y.