

ROMANIAN EDUCATIONAL SYSTEM AND INTELLECTUAL CAPITAL - CHALLENGES AND SUCCESS FACTORS

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Abstract

The implementation of sustainable development strategies in Romanian society already marked by many gaps compared to the competitive societies in the European Union and worldwide is conditioned by the quality and quantity of the intellectual capital owned and used. Education is a strategic factor in the long-term development of a society and aims at multidimensional and forward-looking modeling of the human factor. This leads to a "knowledge society" and involves new steps in educational policy, implicit in the transformation of the educational system. Intellectual capital can be put in a direct relationship with the art and science of deriving maximum value from the resources at the disposal of society in general or of an organization in particular but also of the capacity and modalities of using these resources. Knowledge means power and profitability.

Keywords

education system, intellectual capital, success factors, challenges, Romania

JEL Classification

I28, J08, M54

Introduction

The education system represents the component of the national education system, which includes pedagogical organizations specialized in designing and carrying out the activity of education on levels, steps, training cycles, managerial led to optimal capitalization of the pedagogical resources available, developed and continuously perfected in pedagogical context and socially open. In an open, macro structural context, the public education system is developed and developed as part of the global social system, while microstructural it is related to its main subsystem, meaning the educational process in which specific education/training activities are designed, development in concrete situations, depending on existing pedagogical conditions and resources, available in time and space. From the perspective of the curriculum paradigm, the public education system defines the ensemble of formal and

non-formal pedagogical organizations and of the special actors involved in the development of education on the basis of contractual and consensual relationships, credible within the family and the local community.

Organized according to the National Education Law no. 1/2011, with the subsequent modifications and completions, the Romanian education, through the social mission assumed by the public education service assumes the role of *"educating the mental infrastructure of the Romanian society in accordance with the new requirements deriving from the Romanian statute as a member country of the European Union and its functioning in the context of globalization"* through the design and realization of a *"highly competitive national human resource able to function effectively in present and future society"*. (Legea 1/2011, art 2(2))

The managerial structure of the public education system is a prerequisite for capitalizing on the pedagogical resources necessary for the design and realization of the specific activities. The functioning of the school is regulated in Romania by Law 1/2011L, by the ROOPEU, by the Law on Quality, 87/2006, which, in one way or another limits the freedom of action, the possibility of adopting personal initiatives.

Under current economic conditions, *intellectual capital* is a critical success factor for organizations using intensive knowledge but also for other types of organizations. Intellectual capital can be defined in different ways. Most definitions have similar elements, such as: the invisible character of intellectual capital; the close relationship of intellectual capital with the knowledge and experience of employees, customers and technologies that the organization uses; the causal link between intellectual capital and the future success of the organization.

Thomas A. Steward (2007) defines intellectual capital as *"intellectual material knowledge, information, intellectual property, experience that can be used to create wealth"*. Similarly, there are definitions given by Hugh McDonald: *"the knowledge that exists in an organization and which can be used to create a competitive advantage"*, by Leif Edvinsson (2000) *"knowledge that can be converted into value"*. In the literature, a series of works were developed to develop a conceptual framework to foster an understanding of the notion and structure of an organization's intellectual capital. Thus, according to Edvinsson and Malone (1997), *"the intellectual capital of an organization is divided into three basic forms: human capital, structural capital and customer capital"*. They associate the term human capital with all the individual capabilities, the skills and experience of the employees and the managerial staff, the creativity and the spirit of innovation, define the structural capital as a support infrastructure for the human capital, and in the client capital are included the relations with the clients. Sveiby and Lloyd (1987) argues that *"the intellectual capital of an organization can be classified as a family of three entities: employee competence, internal structure and external structure"*.

Brooking (1996) splits the intellectual capital of an organization into 4 categories: human-centered assets, infrastructural assets, intellectual property and market assets.

This framework differs from the previous one, because the second entity, the structural capital or the internal structure is divided into two separate entities. Infrastructure assets include processes, methods and technologies, while intellectual property assets refer to patents and copyrights. According to van Buren (2002), *"the intellectual capital of an organization includes the skills (mastery) of employees, the processes that take place in the organization and the value of customer relationships"*. As such, financial assets are not included in the intellectual capital structure.

OECD (*Organization for Economic Cooperation and Development*) defines in 1999 the intellectual capital as the economic value of two intangible assets of the organization: the organization of structural capital and human capital. Structural capital refers to ownership of information systems, distribution networks, supply chains. Human capital includes human

resources, customers, and suppliers. Often, the term intellectual capital is treated as synonymous with the term intangible or active assets of knowledge. Anyway, OECD considers intellectual capital to be a subset of knowledge assets.

Human capital represents, according to the aforementioned definitions, the knowledge, skills and know-how "employees take with them when they leave in the evening", meaning innovative capacity, creativity, know-how, accumulated experience, ability to work in teams, employees, tolerance for ambiguity, motivation, job satisfaction, learning ability, loyalty, training, education. Thomas Davenport (1999) builds an employee model as an investor in human / educational capital. He notes that "over the past few years, the number of highly-skilled jobs has increased at all levels of education, to the detriment of low-skilled, low-skilled jobs as well as lower-level managers". Investing in continuing education appears as a priority for individuals and insurance against the risks of unemployment and poverty. On the other hand, companies can achieve a higher profit by investing in the education of their own employees rather than by increasing the stock of economic capital. Effects on the level of labor productivity are seen immediately, with employees becoming more creative and with increased decision-making independence, able to react more effectively with optimal solutions in new and unexpected situations. The special interest in investing in human capital is also reflected by the constant concern of OECD to support economic growth through educational capital development programs.

Relational capital focuses on resources that emerge from the company's external relationships with customers, suppliers, and research-development partners. It compresses that part of the human and structural capital that is involved in the company's relations with the shareholders. Examples are customers' image, loyalty and customer satisfaction, vendor relationships, commercial power and negotiating ability with financial entities.

Structural capital refers to the knowledge that remains in the firm "in the evening after the employees leave". This compresses organizational routines, procedures, systems, culture and databases (examples: organizational flexibility, documentation services, the existence of knowledge centers, the general use of information technology and the learning capacity of the organization).

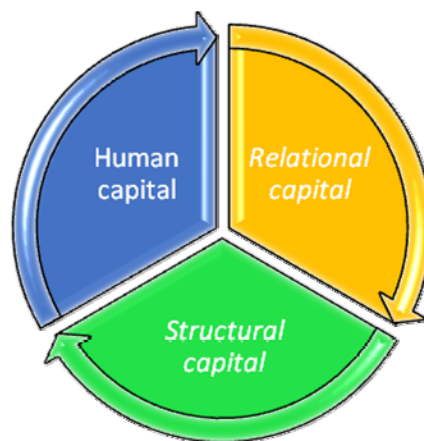


Fig. no. 1 Elements of intellectual capital

Source: authors representation based on the literature review

As we represent in figure 1 the intellectual capital is the sum of what people in an organization know, a way that gives them competitive advantages on the market. It is recognized as a value (knowledge that can be converted into values) in most organizations but is not measured and evaluated in any other financial statement of the organization, except for the market value achieved on the stock exchange.

Challenges and success factors in the relationship between education and intellectual capital

Knowledge and knowledge management is set up in key areas for organizations (such as *Knowledge intensive*). This involves changes in organizational structure, culture, and processes. *"The organization becomes intensive knowledge from the moment it is aware of the knowledge held, materialized in intellectual capital"*. An organization excels and is competitive in the long run by creating an organization culture that promotes and supports the innovation process. *"There is a direct relationship between the extent to which an organization proves to be innovative and its ability to expand intellectual capital"*. Thus, the defining marks of successful organizations in intellectual capital are: the specialization of their abilities and capacities, of the employees; niche expertise; intercultural capacity, and these goals are achieved only by accessing a quality, sustainable education.

Romania is a competitive international player through innovation and quality of work. This means that the knowledge and information society is no longer a simple word game and the concept of education aims at qualitative mutations of the functioning structures at the level of organization, management, the realization of existing or available pedagogical resources as well as in the presence of the relationship with the society (Grigorescu, Chitescu, Lixandru, 2017). Thus, the continuous reform process by which the Romanian educational system is transformed as the foundation of intellectual capital can be defined both from a *synthetic perspective "a structural and systemic innovation within the education system"* and from a descriptive perspective as *"a changing the educational system at the level of education's finality, structure, content of the educational process"*. The reforms of the past two decades in Romania and in the European Union focus on the quality of basic education in order to equalize the chances of social success, to redesign the training in the perspective of permanent education, to decentralize the structures of the education system in the perspective of decentralization of education by promoting the model, pedagogical distribution. The Europe 2020 Strategy, adopted by the European Council on 17 June 2010, aims to *"build a smart, sustainable, inclusive economy to face strong competitors"*.

The Romanian educational ideal, defined in the volatile context of Law 1/2011, is transposed as *"the main purpose of Romanian education is the formation of competences defined as the multifunctional and transferable set of knowledge, abilities and skills"*. Specialists believe that quality education implies a functional partnership between the school-family-community, each triad member contributing to the availability.

The quality concept, the quality culture, the internal and the external evaluation, which are contained in Law 87/2006, have the role of aligning, at least at declarative level, the Romanian education with the requirements of the European Union, so that the graduates have the possibility to find jobs in the Community's economic space (Tănase, Velica, & Chițescu, 2017). At the level of school organizations, the concepts of the concept have a certain dynamic, which is justified by the fact that social praxis is in a continuous development. Organizational culture, managerial subcultures, quality, learning, are a resultant and determinant in the process of modeling and personalizing personality. Specialists in the quality of education consider it to be manifest when recording the student's progress relative to the previous level.

In formulating the educational ideal, L.1 / 2011, Art. 2 (3) refers to the insertion on the labor market of graduates; *"the national curriculum is not adapted to the exigencies of the Romanian market and thus quite faint, and even less to the ones of the single European space to which we provide quite a large amount of unskilled labor force"*. The quality of the instructive-educational process, macroeconomic indicators and quality of life are considered relevant indicators of social development, the established criteria that correlates school with social success.

School abandonment is for Romania beyond the European Union average, being determined by poverty, lack of existential models, and prospects of integration into the labor market. Not taking into account the personality structure, the native qualities of the educators, the political decision-makers have abolished the professional schools, the consequences being reflected in the labor market.

In a Romania where there are approximately 250,000 illiterates (2011), although education is considered a national priority by L.1 / 2011 and with a "*budget allocated to education that is about 4% of GDP*", the contribution of intellectual capital formation is a difficult mission of Romanian education.

The present study is based on the authors experience in the Romanian education system in the last 25 years and the opinions collected from the stakeholders along this period of time and the literature studied, other specialist opinions and studied published, public debates and public strategies and policies.

Challenges Romanian education needs

The analysis of the two interdependent elements of the society and addressed in our study led to the identification of the main challenges Romanian education needs to respond to in relation to intellectual capital:

- *The anticipative correlation of the education system offer with the structure and requirements of the labor market* - encouraging individual professional development that leads to a highly skilled workforce that offers society solutions to address current and future challenges. This desirability implies the development of the administrative capacity of schools to identify clearly and concretely the market segment they are positioning and needs to adapt, defining the skills and qualifications they form, and the power to develop their capacity to monitor to their own graduates. In Romania, there are situations where schools produce labor, which does not find the right place on the labor market.
- *Generating knowledge through innovation and lifelong learning* by selecting and diversifying the amount of knowledge to be assimilated through the pooling of professions by building mixed educational teams involving both the educational and the business environment to make it possible to exchange knowledge, experience and good practice. The inadequate, incomplete and constantly changing legislation in the field of education, the current deficiencies of the legislation in the field of education have the consequence of the relatively low adaptation of the educational offer to the real requirements of the labor market and the maintenance of a non-operational qualification system for the labor market in Romania.
- *Cooperation between schools internally and in Europe*. In terms of developing human capital, the establishment of inter-scholar structures of permanent education and training, at the administrative and financial level, which can provide real opportunities for universities to carry out a reform of the educational system in order to allow the recognition of learning outcomes at these levels structures.
- *Continuity of inserting the effects of globalization and internationalization of education*. The European system encourages the use of modules, the mobility of students/ teachers and the emergence of education and training needs based on dynamic market demands. It highlights the need to develop a set of indicators for evaluating study programs to determine the extent to which the competencies declared by the school, respectively acquired by the graduates, and are real. An integrated approach to study cycles is also required by developing a set of indicators for assessing acquired skills.
- *Strengthening dialogue and strengthening cooperation between schools and businesses*. Strengthening school-to-business cooperation will be a continuing challenge in the coming

period. The need to target schools to employers' needs, given that employers can change the educational market, is a major desideratum for schools. The need for a balance between what schools offer and what employers need, the development of institutionalized communication between the two partners becomes more and more visible, the improvement and rehabilitation of the Occupational Framework in Romania, both at the specializations offered by schools and at new occupations on the labor market. Schools have to define and decide which extra-curricular activities to include in their curricula that give graduates the transversal skills required by employers.

- *Creating career opportunities.* The labor market faces both sub-skill and over-qualification problems. Schools need to take responsibility for creating career opportunities for their graduates and diminishing them until the discrepancies between the skills acquired by graduates and the requirements of the positions they are engaged in are eliminated.
- *Demographic decline, population aging and migration from rural to urban areas.* The active population of Romania knows a marked decreasing trend, which is also felt in the number of the school age population. The phenomenon of emigration among the active population will continue in the next period and will lead to a decrease in the rate of activity in Romania. Aging populations and depopulation of rural areas and small towns by migrating populations to more economically and socially developed areas lead to the transformation of rural and small towns into underdeveloped areas with a level of poor educational services.
- *Underfinancing the education system.* Access to education, including university, and its accessibility become increasingly dependent on the material state of the family. Budgetary policy will have to be geared towards funding schools according to new criteria - reducing public funding and supporting funding based on results and performance criteria. Technological change will only be possible by intensifying the teaching-development-innovation effort, both in schools and companies, and will not be possible without a state-supported funding system. In the absence of a legislative framework regulating a performance-based financing system for schools, the current funding system will continue to be detrimental to the quality of the educational process and scientific research

Success factors for intellectual capital development

The main **success factors** identified from the perspective of intellectual capital development are different if they are presented from the perspective of education units, business environment and society in general (Grigorescu & Bob, 2010; Ruiz & all, 2014).

a. For education units, the development of human capital will be appreciated as advantageous under the conditions it provides:

- Developing educational programs correlated with dynamic labor market demands for the training of graduates with the skills and abilities required by employers and meeting the requirements of a globalized market;
- Developing educational programs that generate higher skills for graduates as key factors in stimulating creativity, innovation, entrepreneurship, leadership;
- Develop existing workforce skills and current hiring, taking into account that around 70% of the workforce in 2020 currently has a job by encouraging lifelong learning by designing flexible ways of delivering educational services;
- Improving educational services and increasing the visibility of schools in educational services providers through new curricula, new learning methods for adults and new study models;
- Development of an operational qualification system for vocational, high school and post-secondary education in Romania, including national descriptors to be specified

at each study program level;

- Establishment of a data bank of labor needs at the national level, on the eight development regions of Romania, starting from the requirements of the labor market;
 - Increasing the number of graduates working in partnerships with schools;
 - Developing permanent learning networks to remove barriers between different levels of training and promoting links between vocational education and secondary and post-secondary education;
 - Developing, expanding and diversifying the activities of vocational counseling and guidance centers and monitoring their progress;
 - Encouraging demand from disadvantaged socio-economic groups for participation in the formal education and training system;
 - Increasing schools' contribution to strengthening the business environment's ability to cope with economic, technological, marketing, environmental and risk issues;
 - Diversification of research opportunities for the teaching staff and graduates, including in enterprises;
 - Developing *spin-offs* and generating new jobs;
 - Updating the current legislative framework, often inaccurate or deficient, and adapting it to the contemporary realities of Romanian education.
- b. For *the business environment*, human capital development will be judged to be successful if it ensures:
- Information on the impact of future technological developments and their risks;
 - Support, through consulting, training and resources, with priority of IMMs;
 - Improving the business school dialogue to identify the need for personal training, the impact that future technological developments may have on them, the risks to which they are exposed, the need for research, development, innovation etc .;
 - Diversification of opportunities offered to employees to update/improve their level of knowledge, in their field of activity or acquiring new skills;
 - Stimulating employee participation in formulating company development strategies; expanding communication channels and treating the launch/support/development period of proposals or "time worked" solutions;
 - Regulating intellectual property rights and improving access to patents, patents, specialized publications, and increasing accessibility;
 - Ensure that high-quality teaching staff prepare their future employees in line with industry requirements and instead fund schools from public funds collected from taxes and duties;
 - Ensuring the necessary regulatory support for the institutionalization of the relationship with the higher education institutions.
- c. For *society*, the development of human capital will be appreciated as successful if it ensures: increasing the level of satisfaction and the degree of happiness of the population at the level of the entire society.

The correlation of the labor market requirements with the type of competences and qualifications offered by the Romanian school represents, in our opinion, the main element of the interaction between the educational system and the intellectual capital. The challenges that arise in establishing an effective relationship between these elements can be successfully overcome by properly addressing all the factors that influence this relationship and which, on the three levels, school, business environment, society, expresses the state of affairs of a society that oscillates between mess and the identification of modalities of propensity on the axis of temporality. That is why, for success, rigor, involvement, continuity and the desire for genuine change are required.

Conclusions

The beneficiaries of human capital development are individuals, companies and society. Investing in human capital as a political decision with important distributional and growth effects is conditioned by the evolution of the education system as a basic trainer. In Romania, beyond certain conservative tendencies, education desires, more or less explicitly, to overcome the boundaries, in other words, it has somewhat visible mutations of essence in all levels of the socio-human. Knowledge can be generated internally but also bought from outside. The development of indigenous intellectual capital can be done only in symbiosis with the development of the national economy, implicitly of the educational system. An education system that generates intellectual capital cannot exist without structure, without sufficient funding, and with a coherent legislative framework, as well as without the discipline of well-defined study objects.

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