

## SMART UNIVERSITY - THE NEXT STEP TOWARDS THE KNOWLEDGE SOCIETY

CUC MĂDĂLINA

PhD, „MIHAI VITEAZUL” NATIONAL INTELLIGENCE ACADEMY (MVNIA),

e-mail: cuc.madalina@animv.eu

### **Abstract**

*The COVID-19 pandemic has irreversibly changed the traditional academic approach, revealing unprecedented perspectives on both university management and the new requirements of the economic environment, requirements regarding the new skills required by the economic environment from graduate students. The informational impact generated both by the increase of the volume, speed, variety and variability of the data with the decrease of their veracity and the return to the concepts of parallel and distributed computing to face these changed environmental characteristics, made the economic environment discover, value and to want to preserve knowledge - seen as the reunion of contextualized information, specialized knowledge, values and human resources they have. The challenge for universities is great, immediate and inevitable. The way they will react can no longer be a traditional one and it will be necessary that all this information flow can be doubled by that of the human resource that can use all the new tools so that with the accumulation of new information he can understand them and turn them into actionable perspectives that provide decision-makers with decision support. This paper addresses an evolutionary scenario of organizational management by implementing the principles and process of competitive intelligence in the broader framework of knowledge management.*

**Keywords:** Smart organisations, Open Source, Competitive Intelligence, Knowledge Management.

**JEL classification:** M14, M54

### **1. INTRODUCTION**

The academic tradition of the top universities had among the essential pillars the pool of school population in the region that wanted to access the bachelor's and then master's studies of these universities. The main attractive factors were related to the costs of education that increase with the distance to the academic environment and the network of teachers in regional pre-university education who in an overwhelming proportion graduated from the top regional university, orienting the pre-university school population in the region. Through the multitude of collaborative tools and online platforms that became accessible during the Covid-19 pandemic, a new perspective was created for the university tradition: the almost complete virtualization of the university educational environment weakening this last attractive factor. For almost a year all universities have been conducting online activities. It is a fundamental difference between taking a course in front of a video camera possibly using a writing tool and some collaborative tools such as screen sharing or scratch pad and a virtual learning environment based on pedagogical principles, focused on the student, who performs an individual assessment and consequently a learning program adapted to each student, with interactive and adaptive learning contents to the student-teacher or student-platform interaction mode, clearly in favor of the latter. But the immediate requirements of the economic environment that take into account the speed, volume and variety of information that it must process and we consider here including organizational and productive environments shaped by digital twins, reduce the traditional stages of learning related to these new features. In this context, the university management decision needs a new decision support based on the traditional one, of the expertise levels of the certified competence components, augmented with a new decision support component based on modeling and simulating the institutional competitiveness and the graduates' competitiveness. If for the second one an analysis of the need for competitiveness is needed both at global and regional level and the establishment of a need for new skills that will be obtained through a curricular change, for the first component that will have to ensure institutional competitiveness needs to be approached in the form of a process, possibly

piloted in a primary phase, then calibrated, validated and implemented at the level of university organization flows, adding new metrics for measuring competitiveness, dynamic and correlated with the economic environment.

The process chosen to increase decision support is the competitive intelligence process with tools for collecting and structuring open sources from the external environment.

The implementation of the principles of competitive intelligence at the level of university educational management means, in a first stage, the accumulation of knowledge necessary to establish the main theoretical landmarks of Intelligence, OSINT, Competitive Intelligence and Knowledge Management, which underlie the development of knowledge management skills , education / training harmonized with current demands and the widespread use of collaborative work technologies in BIG DATA environments

The exponential growth of data both before the pandemic and especially during the pandemic has accelerated the process of globalization, as a process of integration, interdependence and communication, being an important challenge to national education systems especially in the university. In the post-informational age or the age of the knowledge society, a key element of this challenge is the management of information at the organizational level. In terms of information management technology, the emphasis is now on collecting and structuring the multitude of easily accessible information from BIG DATA environments, as their classical assimilation is practically impossible.

The most developed and advanced discipline in information management is competitive intelligence, in the business and business sector of the last decades, it includes a procedural, methodological and technological arsenal of knowledge transferred from the field of OSINT - Open Source Intelligence. In this sense, in this paper we use the notion of OSI to define the information obtained from open sources and CI to define the notion of Competitive Intelligence.

## **2. THE CONCEPTS OF DATA, REPRESENTATION, INFORMATION, INSIGHT, KNOWLEDGE AND INTELLIGENCE.**

The concept of data is related to that of information and representation and together they shape and make sense by reflecting in our consciousness the phenomena of the surrounding real world and the flow is as follows:

1. The production of the phenomenon in the real world
2. Reflecting (modeling) the phenomenon in our consciousness (producing meaning for the observer)
3. Symbolic representation of the record in our consciousness (production of the data)

Data outside this flow does not make sense, but together with the meaning given by the observer it becomes information. This has been described by Davenport and Prusak [11] who states “data turns into information when its creator joins them meaning” and by Belkin [5] “information is the data with value to the decision making process” both considering that the human factor gives meaning to the data. . Luís Madureira [24] and William Zikmund [44], states “that information refers to a body of facts and / or events organized in a convenient format to the decision making process or in a specific context that defines the relationship between the data” showing that the significance of the data can also be given by computing machines through the correlations between the data, but all within the reference to a real phenomenon pursued, in order to make a decision regarding that phenomenon.

The fact that information makes sense does not automatically mean that it is also understood. The process of understanding information is the process of thinking that establishes continuous and dynamic relationships between something we know and what we learn. Understanding generates the explanations (specifications) that lead us to the notion of model.

Understood information defines the perspective, the perspective of understanding the real event or phenomenon. If the event is to occur the perspective is called prediction, if the event occurred it is called retrospective [24].

Knowledge is a complex and vast concept, associated with the human being and evolution in the surrounding world and can be seen as a phenomenon, process or result of human activities. Seen as a phenomenon and represented according to the previously defined process, knowledge will be reflected in the observer's consciousness and then will be symbolically represented by data being from this point of view an information. Philosophically, knowledge is "a truly justified belief" or "a justified, true and credible statement"[30], but these definitions are far from complete. Compared to the notion of perspective, „knowledge becomes an Insight that reveals to be true” (Madureira, 2012).

Insights can be actionable or implemented and we refer to a subset of forecasts or not and we refer here to retrospectives. Intelligence is an actionable insight [24]. There are many definitions of the notion of Intelligence, but we will limit ourselves to the one that defines it as an "actionable perspective, which can be implemented in order to make a decision".

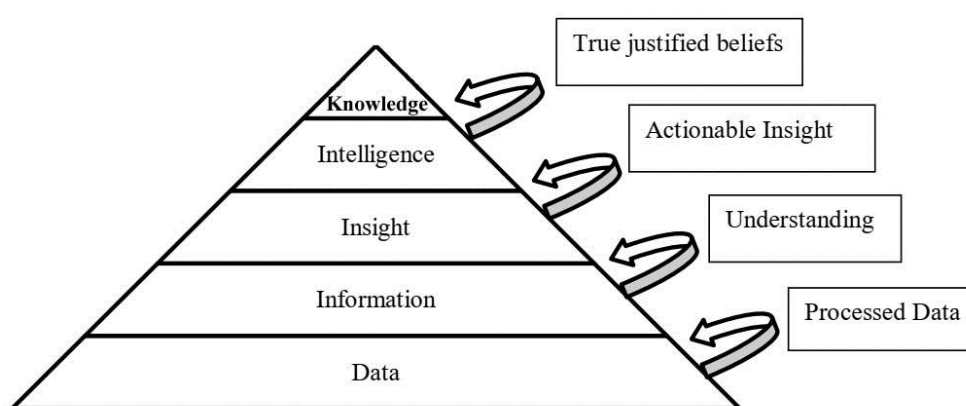


Fig. 1 From Data to Knowledge [24]

The external environment is viewed through all the information contained in it, some public, others sensitive, personal that can only be published under certain conditions and others classified. There are two currents that define information sources: OSINT which refers to classified information obtained from open sources [32] and OSI which refers to information obtained from open sources [21]. The external working environment for the model we will analyze is the second - OSI. We can give an extended definition of OSI as “the totality of information resulting from a complex action of processing data collected from publicly accessible sources, without any restriction of consultation, obtaining, processing and dissemination, in order to produce relevant products, which correspond specific requirements in order to obtain the competitive advantage of the organization over the rest of the organizations in the field ”.

The concept of open sources is an attribute of the need for communication, specific to public opinion. It began to manifest itself as a feature of modern society, with the globalization of information and came to be developed in particular by intelligence specialists, and more recently by experts from various university organizations, think tanks and, more chosen, business.

Open source information , especially in the digital sphere, consists, above all, in a very well structured assortment of links to data from other sources, organized according to subject, time, entities and locations, arranged by relevance, utility. and degree of complexity, and especially focusing on the latest news or additions.

They must be concentrated in an area of sufficient scope for real-time operational information, but without overburdening the beneficiaries, while requiring an accurate assessment of

the importance and relevance of the information. Also, information from open sources, as a carrier of the attribute of openness in the concept of dual intelligence, which contains the complementary fundamental elements of secrecy and openness, are perceived by some specialists as a need to use them as a public good.

From the perspective of conceptualizing the intelligence field, based on the new paradigms, specific to the 21st century and the knowledge society, in the OSINT space, obtaining the strategic advantage, in a security environment defined by volatility and continuous changes, consists in approaching an OODA cycle (Observation - Guidance - Decision - Action) within a dynamic management process of a new system of sources to be monitored by adopting new operational measures, as follows:

- lowering the level of decision to the staff with analytical skills;
- elimination of redundancies and irrelevant channels by using technological solutions for automatic search, processing and filtering of information;
- implementation of a set of criteria for flexible evaluation and validation of inputs and outputs from the system of monitored OSINT sources;
- focusing on:
  - the online press and the gradual abandonment of the printed one;
  - use and possibly construction of news engines;
  - digital social networks: blogosphere and wiki, social networking sites, syndication - transmission of content to other sources;
  - dark web;
- implementation of a specialized structure in the research of gray literature, databases, products made in academic environments. [23]

### 3. THE CONCEPT OF COMPETITIVE INTELLIGENCE

Having defined these notions, we can define the concept of competitive intelligence (hereinafter referred to as CI), a concept with an age of 5000 years [37], the first known work being "The art of war" by Sun Tzu (1988). CI is a dynamic process, in which both the environment and the actors and their roles are in a permanent change, therefore the conceptual definition is just as variable following these changes over time. We will adopt for the rest of the paper the definition given by Brody in 2008: „the process by which enterprises gather actionable information about competitors and the competitive environment and, ideally, apply it to their planning processes and decision-making in order to improve their enterprise's performance ” [7]

Objectives of CI researchers have identified are according to Cucui 2009, Peltoniemi & Vuori 2008 and Wright et al. 2009 [9]:

- *„enhancing the enterprise’s competitiveness;*
- *predicting, with a high level of trust, the business environment’s evolutions, competitors’ actions, customers’ requirements and even influences generated by political change;*
- *providing better support for the strategic decision-making process;*
- *revealing opportunities and threats by surveying weak signals and early warnings;*
- *processing and combining data and information to produce knowledge and insights about competitors;*
- *satisfying the information needs of decision-making and problem-solving, and decreasing reaction time;*
- *devising marketing strategies”*

The main objective of outlining a model proposal of university educational management in the knowledge society, condensed in the phrase "3 I", respectively innovation (creation of new knowledge), learning (assimilation of new knowledge) and partnership interactivity circumscribed

to knowledge, is represented by developing the skills of managing the information needs / requirements of the beneficiaries (economic environment, students, teachers), and coordinating the projects and processes of monitoring and collection, respectively analysis and dissemination of IC products developed at the organization level to streamline decision support of university management .

This model can be obtained by combining the two elements OSI and CI approached as a process of planning, collecting, processing and analyzing information for the production and dissemination of educational Intelligence products in order to meet the strategic and operational objectives of universities.

Education is an important element of globalization because it produces human capital, human capital that has no borders and is free to choose where to operate. Globalization helps education a lot. Not infrequently we find out about scholarships in different parts of the world. Not infrequently we find out about specialists trained in various schools around the world and then employed in countries other than those from which they come. We must not ignore the fact that in recent years important steps have been taken to standardize education systems around the world. We must not forget that Romania has begun the process of standardizing the university education system. As for university education, it has largely the same characteristics as in Europe. Many young Romanians receive scholarships abroad to attend university courses, just as foreign students work in Romanian universities. It is interesting to note how, in societies where the phenomenon of globalization is much better implemented, the mobility of those who study is increasing. It has become a necessary condition for them to study not only in one country but also to expand their knowledge in other cultures. Perhaps it is this cultural diversity that makes universities in Europe much better than those in the country. The education sector is currently undergoing rapid changes, so that it can respond to the changes caused (or in the process of manifestation) in the structure of the workforce by the impact of the information revolution.

The new generation of the workforce, and for the most part the current generation, must be prepared to face a shapeless future, for the time being, only in a broad sense. In other words, it is important that, through education, the individual develops the ability to find the necessary information, in order to fulfill as effectively as possible the role entrusted by society. [23]

The education system must face and actively influence the solving of the problems of the society in which it is integrated. In the context of the information explosion, the creation of databases and knowledge and the production of radical changes in information processing technology, the educational process must ensure the individual's attempt to have an appropriate training.

Our century has the chance to multiply the possibilities of interpreting information, as a result of the use of telecommunications, computers and computer science or due to the ways in which different sciences such as physics, economic and social sciences, biology regulate information.

The human informational universe changes by generating new information or by creating more efficient means of collecting, transmitting and processing by the computer and the computer program some informational functions - sometimes even decisional -, limited of course to the internal model of the fragment of reality. where they act.

In this new informational universe, information trains to a high degree the natural intelligence of man and the social intelligence as a whole. Education must cope with these changes both to endow man with the necessary knowledge and to modernize his own means.

The continuous development of automation of data flow in society makes computer training an extremely important object. Well-designed computer programs promote the educational process by increasing its effectiveness.

At the same time, the dynamics of society's development, especially in the first decade of the new century, required new answers to the challenges posed by globalization, the technological revolution and a new cultural reality, which includes radical changes in the social environment.

On the labor market, instead of the classic competition, which involved a construction focused on their own actions, we moved to a dual approach to business, also seeking to increase the efficiency and quality of products through internal measures of the organization, and constant attention to changes that competitors produce them in the reference market.

From the organizational perspective of a university, CI offers the attribute of Smart Organizations, ie the realization of an entity that has the ability to be competitive, anticipate and react both internally and externally, so as to maximize positive results and reduce their own vulnerabilities. This type of organization masters the essential landmarks of Competitive Intelligence, in other words it manages its activity according to a plan able to use the data obtained in an intelligence process that involves decisions at a tactical or strategic level.

Competitive Intelligence targets the internal and external environment and competitive factors, having as analysis targets workflows, student relationship management, with companies and the economic environment in which they will work after graduation, with teachers, and other institutions involved in the process. education. CI aims to streamline the activity and obtain the competitive advantage over other universities by analyzing the performance of workflows, the level of expertise achieved in the competencies of graduates with their redesign.

Competitive Intelligence's action model for universities in the face of challenges can be summarized in the form of 5 steps:

1. focusing on identifying a coherent set of objectives;
2. implementing and encouraging an organizational culture compatible with the action of Competitive Intelligence;
3. institutionalization, incorporation of Competitive Intelligence practices in the daily activity of managers;
4. changing the processes, the individual behaviors and, in general, the activity so as to reach the organizational objectives;
5. the effective achievement of Competitive Intelligence in the sense of its dynamic functioning, the organization of the activity being achieved by focusing on the adaptation and continuous improvement of the activity.

## **COMPETITIVE ADVANTAGE**

CI does not only mean gathering information and transmitting it to university managers, but knowledge in the highest sense of the term, a way of understanding the world using all sources. In a society where knowledge means added value, CI plays a key role in the positive effect combined between novelty and quality, both as a stand-alone product and as an element of multi-source analysis, by:

1. updated information, most often obtained in real time;
2. the ability to cover information gaps from other sources, by providing a broad view of the security picture;
3. the presentation of some approved points of view of some specialists, by requesting their expertise and the use of “gray literature”.

At present, the stake of CI development is closely connected with the development of information and communication technology, being necessary: adaptation to the dynamism of the online environment; implementation of IT platforms to identify priority requirements; ensuring and supplying accessible and interoperable databases; developing the link between OSI providers, beneficiaries, partners and experts outside the intelligence sphere (academic, business and research centers) in a beneficial environment to strengthen cooperation; facilitating the formation of teams in multidisciplinary projects, given that the Web 2.0 era requires changes in analytical practices.

Regardless of the specificity of one economy or another, globalization has brought nations and, beyond them, companies to a field where competitiveness is essential. Competitive Intelligence thus acquires, by capitalizing on open sources, a key role in the dynamics of the knowledge-based society. Starting from the premise that the new reality is an independent variable, the changes that this type of society generates become dependent variables.

In other words, CI and OSI, as parts of the knowledge society, will generate the scientific multiplication of information, which becomes visibly transmitted and reproduced on a planetary scale. It is essential that the nature of the information transmitted changes radically, being associated with expanding technologies, new management strategies or a variety of competitive techniques.

Open sources have exceeded the limit of competitive advantage given only by surplus (data actually obtained) and have become part of the science that offers competitive advantage: they are found in the diversity of types of management or are effectively incorporated into new applied technologies.

From this perspective, CI makes the transition from user of open sources to integrator of the added value brought by information, in the organization, products, competencies and skills, partnerships with the economic environment and civil society, etc.

## **INFORMATION AND KNOWLEDGE MANAGEMENT**

Information and Knowledge Management hereinafter referred to as IKM, at the university level, is a complementary OSI and CI activity, and is represented by a set of practices for identifying, creating, representing and distributing information and knowledge to improve performance, promote innovation and gain competitive advantage.

IKM addresses the development and coordination / administration of activities for collecting and processing environmental information (university system, ARACIS, MEN, social, economic, cultural, etc.), in order to analyze and accumulate knowledge on a didactic, managerial, social - communication and classical and virtual learning technologies, in order to better configure the decision-making framework at the individual level (student, teacher) and institutional (university). Knowledge management involves managing the flow of information in such a way that the correct information has the right recipient, through the administration, development and transfer of knowledge between individuals interacting within the university.

In a frequently cited and implicitly credited approach, Snowden [12] identifies three distinct stages in the evolution of knowledge management. The "first generation" or "information management" stage dates back to 1995 and was concerned with IT processes, information flows and their structuring in databases.

Knowledge was understood as a manageable and distributable “object” that does not require human interaction and contextualization. At the intelligence level, technical sources and economic data on competition were seen as knowledge.

The second generation continues from 1995 until the beginning of the 21st century. It focuses on "human resource management" and knowledge processes. The reference model, SECI, is the one proposed by the Japanese school in the field [28] signed by Nonaka and Takeuchi [28] who stated „there are two types of knowledge: tacit knowledge and explicit knowledge; explicit knowledge is objective and relational knowledge, which can be expressed through formal and systematic language with words, numbers, formulas, etc. and tacit knowledge is personal and difficult to formalize and refers to the knowledge held by an individual, community, organization or country and is very difficult to explain”. [28]

Explicit knowledge consists of information that can be communicated and is likely to be true or false. Nonaka argues that an individual may not be aware of what he knows and how he can achieve certain results, but this does not mean that he does not have knowledge. This would be tacit

knowledge. Explicit knowledge is the knowledge that an individual is aware of, knows that he has it and can communicate it to others through language.

Although with a human dimension, knowledge continues at this stage to be seen as an object that can be measured by the human resource involved. In retrospect, the knowledge management thus conceptualized did not bring major changes in organizations, and the SECI knowledge conversion model was considered by some voices a failure because "there is no conversion of tacit knowledge into explicit knowledge, it did not exist and will not exist." [9]

According to the third generation, "information is the human ability to take effective action in various and uncertain situations", requiring management as both "work" and "flow". [43]

Thus, in order to survive in this complex environment, organizations must have the core competencies to:

- 1) create new ideas
- 2) solve problems
- 3) make decisions
- 4) take steps to achieve the desired result - information being the guiding force underlying any of these processes / competencies [6].

All this within complex adaptive systems that operate in continuous flow, moving uncertainly between different degrees of stability and instability, depending on the context and impact of internal and external events, in relation to internal and external agents and systems.

Stacey (2001) [35] criticizes the first and second generations described above, arguing that they are based on the perception of an external observer, who conceives in advance and then manipulates systems from an external macro position. Viewed from the perspective of complexity theory, this is impossible, because observers are also part of the system they are trying to describe or control and therefore cannot be objective or distant in relation to the dynamics of a system. Returning to the attempt to define the information, Stacey claims that it is neither stored nor distributed, because it is not a "given", but "an ephemeral, active relationship process". And knowledge "cannot be controlled and does not need to be controlled, because knowledge is participatory, the processes of self-organization being structured in coherent ways" [35].

Therefore, the approach to knowledge needs to change for the following reasons:

- Management can only be voluntary, it cannot be mandatory. People will not share knowledge if they do not want to. No technique, motivation or reward could change that.
- We can „know more than we can say and we will always say more than we can write down. Knowledge is such that we know or can know more than we have the physical time or conceptual ability to put into words.
- „We only know what we know and only when we need to know”. Human knowledge is deeply contextual and is triggered by circumstances. To understand what people know, we need to redo the context and then ask a "meaningful" question to allow the use of the information.

Grant and Grant (2008) [18] analyzed third-generation KM theories and models and identified some key ideas, which are an illustrative summary of how KM was understood by the authors of the third generation:

- Information technology is not a dominant factor, but it must be an activating factor.
- Initial models and taxonomies of knowledge (such as tacit / explicit knowledge) are useful for understanding the nature of knowledge in organizations, but they are not exhaustive approaches.
- It is more important to improve the way new knowledge is obtained than to use existing knowledge.
- Understanding the system is dependent on understanding the context in which it operates.
- The personal, social and collective nature of knowledge increases the complexity and makes it difficult to institutionalize knowledge.



- Organizations have intangible values the intellectual resource - that require special management.

#### 4. THE UNIVERSITY ORGANIZATIONAL MODEL PROPOSED IN THE KNOWLEDGE SOCIETY

The functioning of an efficient university depends, from the point of view of human resources, on the development of a culture of collaboration, and in terms of integrated technological elements, on their content and contextual compatibility.

In short, the successful application of knowledge management in a university requires a complex analysis of requirements, in order to translate missions into business processes, networked systems and appropriate technologies.

Given that the central conceptual attribute of an organization is represented by its architecture, it is important that its means of representation take on the role of architectural descriptors in order to faithfully reproduce the structure, interactions and dynamics of workflows.

#### THE BASIC ELEMENTS OF THE ORGANIZATIONAL STRUCTURE

The perspective of experts in knowledge management mainly concerns the five modes of the process and technological perspectives:

1. **Focus on the company** . Emphasis is placed on the values, virtues and mission shared by the people in the organization.
2. **Knowledge of the transaction** . Socialization, the exchange of tacit knowledge through methods such as storytelling and dialogue, are the essential mode of interpersonal transactions for collective learning, or collaboration to solve problems.
3. **Collaborate** . The basis for human collaboration lies in purpose, values, and a common trust.
4. **Facilitators** . A culture of trust develops communities that share best practices and experiences; solving collaboration problems allows for an increase in the culture of trust.
5. **Barriers** . The biggest obstacle to collaboration is the inability of an organization's culture to transform and adopt the sharing of values, virtues, and disciplines.

At the core of a knowledge-based organization is the ability to support the creation of organizational knowledge through learning and collaboration. Effective collaboration involves civic values and virtues, which are shared by all.

**The main components, relevant from the perspective of new architecture** are:

1. Policies - strategic visions and derived policies that clearly define the objectives and approaches necessary to achieve them;
2. Operational processes - secure collaborative processes that allow people to share knowledge and resources within large, complex and properly compartmentalized organizations;
3. System (network) - configured to allow information sharing and comprising a set of databases and applications shared between organizations in a common virtual space;
4. The technology - the functioning of the organization requires the integration of technological solutions, a process carried out on two levels: the definition of standards (metadata, protocols, markup language, etc.) and the incremental transition of technology

#### 5. CONCLUSIONS

CI and OCI bring new tools, with new functionalities, which require the accumulation / development of new competencies, grafted on the current ones. These will contribute to the modernization of the university education system, teaching methods, and the creation of bridges between formal, non-formal and informal learning.

In developed countries, the evolution of communication and information technology has had a great impact on human society, generating fundamental changes in all areas of activity, changes that have added value.

Education is one of the fields that have fully benefited from new technologies, at all levels: the use of web 2.0 tools have facilitated collaborative work, information sharing, knowledge management, efficient resource management, introduction of modern / interactive teaching methods - multimedia input, teacher-student relationship, access to dedicated databases, as well as the elimination of geographical barriers.

The ability to use technological platforms for collaborative work, information resources management, creating a system of sources specific to educational activities, knowledge management, using tools dedicated to collecting / sharing and completing useful information is a set of skills already acquired by staff involved in the process. university education in developed countries, being specific to the knowledge society.

Those who have implemented these technologies in the educational process have become more efficient, more competitive. From this perspective, it is obvious that their adoption is more than necessary to increase the competitiveness of Romanian university education. Therefore, the proposed model can be not only a necessity, but a first step towards a modern, efficient, competitive university education system, based on the concept of competitive intelligence and open sources.

## 6. BIBLIOGRAPHY

- [1] **Achard, P., Bernat, J. P.** 1998. L'intelligence économique. Mode D'Emploi. ADBS Editions.
- [2] **Alain Juillet**, Principiile și aplicarea intelligence-ului economic, Intelligence și securitate: Revistă de analiză și prospecție, nr. 1, Madrid, decembrie 2006
- [3] **Ahmad, R. A et al.** 2008. Knowledge management and competitive intelligence: A synergy for organizational competitiveness in the k-economy. Communications of the IBIMA, 6: 2534.
- [4] **American Productivity & Quality Center, Competitive Intelligence: A Guide for Journey to Best-Practice Processes**, Edited by Emma Skogstad, 2004
- [5] **Belkin, N.J.** (1978), "Information Concepts For Information Science", Journal of Documentation, Vol. 34 No. 1, pp. 55-85. [https://doi.org/10.1108/ ...](https://doi.org/10.1108/...)
- [6] **Bennet, A. și Bennet D.**, Organizational Survival in the New World: The Intelligent Complex Adaptive System, 2004, Elsevier/Butterworth-Heinemann: Boston, MA
- [7] **Bouthilier, F., Gainor, R;** A Methodology for Competitive Intelligence Metrics.
- [8] **Brautigam, D., Gerlach, S., Gloria, M.** 2006. Business intelligence competency centers: a team approach to maximizing competitive advantage. North Carolina: SAS Institute Inc.
- [9] **Cucui, A.P.G.**, 2009, 'A framework for enhancing competitive intelligence capabilities using decision support system based on web mining techniques', International Journal of Computers, Communications and Control 4(4), 326-334.
- [10] **Cynthia, E., Ganesh, U., Miree., Prescott, J.** 2003. Competitive intelligence field research: Moving the field forward by setting a research agenda. Journal of Competitive Intelligence and Management, 1(1): 1-12.
- [11] **Davenport, T., Prusak, L.** 1998. Working knowledge. New York: Harvard Business School Press.
- [12] **Dave Snowden**, Complex acts of knowing: paradox and descriptive self-awareness, Journal of Knowledge Management, Vol. 6 Iss: 2, 2002. pp. 100 - 111
- [13] **Drucker, P.** 1997. Looking ahead: Implications of the present. Harvard Business Review, 28: 18-23.

- [14] **Edwards, R. and Usher, R.** (1997) University adult education in the postmodern moment: trends and challenges. *Adult Education Quarterly*
- [15] **Ethel Auster, Chun Wei Choo** (eds), *Managing Information for the Competitive Edge*, New York: Neal-Schuman Publishers, Inc., 1996, p. 75.
- [16] **Ghoshal, S.** 1999. A empresa individualizada. *HSMManagement*, 14: 20-24.
- [17] **Gilad, B., Gilad, T.** 1988. *The Business Intelligence System*. New York, NY: American Management Association.
- [18] **Grant, Kenneth A. și Grant, Candace T.,** *Issues in Informing Science and Information Technology*, 2008, 584-587
- [19] **Hamel, G., Prahalad, K.C., Yves, L. D.** 1989. Collaborate with your competitors—and win. *Harvard Business review*, January-February: 133-139
- [20] **Henri Dou, Sri Damayantz Manullang, Henri Jean-Marie Dou,** *Competitive intelligence, public-private partnerships, innovation and regional development*, INTEC, 2007, [http://www.madrimasd.org/informacionidi/biblioteca/publicacion/doc/35\\_INTEC.pdf](http://www.madrimasd.org/informacionidi/biblioteca/publicacion/doc/35_INTEC.pdf)
- [21] **Ian Wing,** *Refocusing Concepts of Security: The Convergence of Military and Non-military Tasks* (Duntroon ACT: Land Warfare Studies Centre, 2000).
- [22] **Jean – Francois Lyotard,** *La Condition postmoderne: Rapport sur le savoir*. Paris: Editions de Minuit, 1979
- [23] **John Tomlinson –** *Globalizare și cultură – Ed. Amacord, Timișoara, 2002, p. 56*
- [24] **Madureira, L;** SMINT - Social Market Intelligence - Strategy, Innovation, Growth - International Exec, Lecturer & DJ. at OgilvyRED [online] Available at: Marco, A. S. 1999. *Inteligencia competitiva: definicoes e contextualizagao Transinformando*, 11 (2): 95-102. <<http://www.slideshare.net/lmadureira/2012-11-08-luis-madureira-scip-exec-address-slideshare>>
- [25] **Magdalena Adriana Duvenage,** *Intelligence Analysis in the Knowledge Age*, 2010; <http://scholar.sun.ac.za/bitstream/handle/10019.1/3087/Duvenage,%20M.A.pdf?sequence=1>
- [26] **Mckenna, T.M., Patton, K.M.** 2005. Scanning for competitive intelligence. *Competitive Intelligence Magazine*, 8(2): 24-9.
- [27] **Nasri, W.,** 2011, 'Competitive intelligence in Tunisian companies', *Journal of Enterprise Information Management* 24(1), 53-67. <http://dx.doi.org/10.1108/17410391111097429>
- [28] **Nonaka, Ikujiro; Takeuchi, Hirotaka** (1995), *The knowledge creating company: how Japanese companies create the dynamics of innovation*, New York: Oxford University Press, pp. 284
- [29] **Peter Checkland & Sue Holwell.** *Systemic Practice and Action Research* volume 11, pages9–21(1998)
- [30] **Strauss, Leo.** *On Plato's Symposium*. University of Chicago Press (2001). ISBN: 0226776859
- [31] **Prescott, J.E.,** 1999, 'The evolution of competitive intelligence: designing a process for action', *APMP*, 37-52.
- [32] **R. D. Steele,** *open Source Intelligence*, in *Handbook Of Intelligence Studies*, Loch K. Johnson ed., New York: Routledge, 2007, 138
- [33] **Rouach, D., Santi, P.** 2001. *Competitive Intelligence Adds Value: Five Intelligence Attitudes*. *European Management Journal*, 19: 552-559.
- [34] **Stephen Marrin,** *Intelligence Analysis Theory: Explaining and Predicting Analytic Responsibilities*. *Intelligence and National Security*. 22:6 (December 2007). 821- 846.
- [35] **Stacey, R.,** *Complex Responsive Processes in Organizations: Learning and Knowledge Creation*, 2001, London: Routledge
- [36] **Strategic and Competitive Intelligence Professionals (SCIP),** *Strategic and Competitive Intelligence Professionals*, viewed 15 August 2012, from <http://www.scip.org/>
- [37] **Tao , Qingjiu, Prescott , John E. China ,** “ Competitive intelligence practices in an emerging market environment ” , *Competitive Intelligence Review* 11 , no . 1 , ( 2000 )

- [38] **Venter, P. & Tustin, D.**, 2009, 'The availability and use of competitive and business intelligence in South African business organisations', *Southern African Business Review* 13(2), 88-117.
- [39] **Vladimir Pasti, Mihaela Miroiu, Cornel Codiță** – România – Starea de fapt Volumul I Societatea – Nemira, București, 1997, p. 116
- [40] **Viviers, W., Saayman, A. & Muller, M.**, 2005, 'Enhancing a competitive intelligence culture in South Africa', *International Journal of Social Economics* 32(7), 576-589.  
<http://dx.doi.org/10.1108/03068290510601117>
- [41] **Weiss, A. & Naylor, E.**, 2010, 'Competitive Intelligence: How Independent Information Professionals', *American Society for Information Science and Technology* 37(1), 30-34.  
<http://dx.doi.org/10.1002/bult.2010.1720370114>
- [42] **Wright, S. & Calof, J.L.**, 2006, 'The quest for competitive, business and marketing intelligence: a country comparison of current practices', *European Journal of Marketing* 40(5/6), 453-465. <http://dx.doi.org/10.1108/03090560610657787>
- [43] **W Mark McElroy, Joseph M. Firestone**, *Key Issues in the New Knowledge Management*, Butterworth-Heinemann, 2003, p. 324
- [44] **Zikmund, W.G.** (2000) *Business Research Methods*. 6th Edition, The Dryden Press, Fort Worth.