

The Ability of Tacit Knowledge Sharing as the Competence Needed in the Knowledge Economy¹

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Abstract: In recent years grows the importance of competence in the process of seeking employment and to adapt education systems. Competence of employees builds and improves the organization. In the knowledge-based economy, intellectual ability of workers in particular tacit knowledge is necessary to build the company's capital. Tacit knowledge, in contrast to explicit knowledge is knowledge of individual people, not the organization as a whole. It is practical knowledge stems from an understanding of explicit knowledge. It is a key strategic factor in determining the competitiveness of the organization in the market. The ability to build tacit knowledge as practical knowledge is necessary competence in the economy of the future. The market of educational services and employment cannot operate in isolation from each other, they complement each other.

Key words: tacit knowledge, higher education, lifelong learning, competence

Introduction.

Modern enterprises that aspire to be both contemporary and competitively operate within the rules of the new economy based on knowledge. The experience of developed countries shows that the best chance of survival and success occurs in those organizations that have implemented a knowledge economy based model. This is due to changes in management methods and especially the change of perspective in analyzing company resources. At the time of the massive increase of information resources and dynamic changes in the economy and consumer markets, an important component of enterprises is human resources with their flexible knowledge, motivation to action, and creativity.

The so-called “new economy” is based on the rules which emphasize the role of knowledge in shaping the competitive advantage of the organization. Knowledge in today’s market games has become a key resource of organizations. As a result, the value of the company is based on the resources inherent in the knowledge and competence of its employees. Business management in the perspective of building its economic potential is changing. No hardware resources, raw materials and physical strength of the employees are key to their economic strength, but the substantive preparation of employees, their knowledge, and methods of sharing it in the enterprise. The main economic potential of enterprises lies in the minds of employees to this new dimension is taken on by knowledge management in the enterprise. Knowledge management is a relatively new approach to the management of

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information resources in an organization. Knowledge management refers to *explicit knowledge* and *tacit knowledge* (Hedesstrom, Witley, 2000).

Explicit knowledge can be written in the form of symbols, digitally processed, and communicated. Explicit knowledge is passed in the literal form to others, and can be stored, processed and used. The result of the processing of explicit knowledge is tacit knowledge, also called personal knowledge (Reber, 1992). M. Polanyi, the founder of the post-critical philosophy considered the nature of scientific knowledge and methods for its application in the perspective of its use and usefulness, as opposed to the positivistic understanding of science, which is a collection of theorems and axioms to reproduce. Polanyi proposes an approach to science, its practice and use on the assumption that knowledge is not possible without personal items, without items of epistemological approach. We owe him the concept of the meaningful whole and the processing of knowledge which leads to tacit knowing. It results from personal decisions and tacit premises. The main assumption of Polanyi's view is the thesis that all knowledge has an irreducibly personal dimension, i.e. it is not possible without the activity of a knowing subject. The primary function of the subject is, on the one hand, dispersed data processing from experience to a meaningful whole, on the other hand the gradual correction of meaningful wholes on the basis of this new data and experience.

Tacit knowledge as a result of tacit knowing is of a practical nature. It is the quintessential experience, a sense of technology, transgression made on learnt opinions, conscious or unconscious ideas, a trained ability to recognize issues and situations, etc. This kind of knowledge, in its essential part, is non-transferable to others and cannot be stored on paper or electronic media. Tacit knowledge is a consequence of years of learning, gaining experience, and unspecified skill building within the mind, associations inexpressible by language, along with rules of inference and decision making.

Tacit knowledge, in contrast to explicit knowledge, is the knowledge of individual people, not the organization as a whole. However, it is a key strategic factor in determining the competitiveness of the organization in the market.

Sanders in the 1988 study identified Polanyi's three theses on what people know:

Polanyi makes three main claims:

1. A set of wholly explicit rules or algorithms (explicit knowledge) for finding or testing theories cannot adequately account for the true discovery provided by the progress of science.
2. Knowledge, though public and social, is in varying degrees also inherently personal.
3. Not only is it impossible to make all knowledge personal, but the knowledge that cannot be specified is more fundamental than explicit knowledge.

Implicit knowledge, although inherent in the minds of individuals, is objective knowledge – it can be checked and tested empirically because of its quality and effectiveness. From the point of view of the organization, it is, therefore, important to include this individual knowledge of its workers in the overall organizational culture to which they belong. This process occurs in two dimensions: the silent exchange of knowledge for explicit knowledge, and the conversion of knowledge on the personal level to the knowledge level of the organization.

From the point of view of education is it particularly important to prepare future employees of knowledge-based businesses. Students must early acquire not only theoretical knowledge and expertise, but also the competence for processing and utilization of knowledge. Key dates for the social sciences have become enriched by the concepts of “knowledge society”, “knowledge economy”, and “knowledge workers”. The knowledge economy is the economic order in which knowledge, not labor, raw materials or capital, is a key resource, which should be a major factor of productivity, competitive advantage and growth.

According to the Bologna guidelines already widely known in the academia, the aim of higher level education is to prepare students to become active citizens in democratic societal structures, for building the knowledge society and to form graduates able to face the needs of a rapidly changing labor market. In the current educational reality, the existing, traditional systems focused primarily on the teachers are giving way to systems in which greater ownership is given to the student as an active participant in the learning process, i.e. an individual “co-responsible for the quality of the process and conscious acquisition of knowledge, skills and other competencies within a given course.”²

A learner-centered as opposed to teacher-oriented system directs the attention of the academic community, more than ever before, on the issue of personal development of the student, translated into his or her own activity regarding self-development, which can be described as a sense of responsibility for one’s own development. In a rapidly changing reality, it seems that the only reasonable guarantee of constant maintenance of the individual in the labor market is the ability to learn continuously, which is directly linked to responsibility for a person’s own development.³

The Bologna framework is one of the basic tools of the Bologna Process, which supports the mobility of students and improves the recognition of diplomas and describing qualifications to determine the actual qualifications of graduates of different educational systems in European countries. As part of the European Higher Education Area, the Bologna Framework was established as an attempt to solve the problem of comparability of qualifications and competences of graduates between different countries. This required the determination of the key competencies required in the labor market, common in European countries. The idea of the Bologna process encompasses a broad spectrum of problems. These include not only the structure of higher education, but also a clear indication of competencies for graduates to possess. In turn, in the context of the European Framework, competence is described in terms of responsibility and autonomy. Competence in the context of Bologna process described in terms of responsibility, autonomy is implied indirectly almost all eight levels, and exposed in particular, at the sixth and seventh level.

One can also note that the requirements of employers in relation to future employees are constantly growing and it seems that this trend will not only continue, but escalate. Hence

² Projekt Ministerstwa Nauki i Szkolnictwa Wyższego, *Krajowe ramy kwalifikacji w szkolnictwie wyższym jako narzędzie poprawy jakości kształcenia, Autonomia programowa uczelni. Ramy kwalifikacji dla szkolnictwa wyższego*, Ministerstwo Nauki i Szkolnictwa Wyższego, Warszawa 2010, p. 13-14.

³ *Perspektywa uczenia się przez całe życie. Projekt dokumentu opracowany przez Międzyresortowy Zespół do spraw uczenia się przez całe życie*, Warszawa 2011.

the important role played by the student activities aimed at self-development. The autonomy of the student includes both self-directed learning and the responsibility for one's own development. For each student, the improvement of the competencies that he or she already has should be an important, and also, and perhaps above all – a genuine interest in acquiring new ones.

The issue of students' work on their own development found a detailed theoretical extension in the analysis of education. It included an area referred to primarily as self-education understood in many ways, and usually identified with individual activity, one's self-development, self-growth (Sowiński, 2006), creating oneself, self-directed learning, (Ciechanowska, 2011), or self-realization. W. Okoń, writes in the pedagogical dictionary of 1981 that self-education is „spontaneous human work on modeling themselves on their view of the world, their own attitudes, character traits and personality of their own – according to established criteria, patterns and ideals.” (Okoń, 1981) In this definition (so widely accepted that hardly is its source given), the phrase “spontaneous human work on modeling themselves” is identified with the activity of an individual towards shaping itself and improve. It is an accusation put forward against academic education that too little attention is paid to the students' independent work (Rudolf, 2005). It is indicated that the changes in the preparation of graduates in all fields, including economics, should rely on practical preparation that will allow young employees to manage change, to be the initiators and flexibly transform the knowledge acquired in the university. This requires a creative attitude, the ability to overcome stereotypes and a willingness to create new solutions.

In view of the changing labor market and higher education reforms which seek to train students so as to prepare them for a modern economy, the kind of knowledge that a student has after graduation and her or his powers important for the functioning of the labor market. Criticism against fossilized methods of learning and knowledge transmission is growing, being full of dogmas incompatible to the real work process (Ciechanowska, 2012). Therefore, it is postulated to create programs based on a large number of practices in the workplace, knowing the true reality of the business environment and the methods of application of knowledge in practice. R. Boyatzis conducted a study on the basis of which he proved that a person's success is determined by a combination of factors, which included: personality traits, motives, experience or behavioral characteristics (Boyatzis,2005). The researcher, additionally, created the division into *threshold competencies* – which are basic abilities required on a particular job – and *differentiating competencies* which enable distinguishing persons with better performance from those who perform worse. The first group of competencies includes knowledge and skills, while the second one – attitudes, motives and values. The European approach in terms of trying to define competence is based on the dominant models developed in the UK, Germany and France. In these countries, a strong emphasis on competencies gained in the workplace can be observed, but in each of the, they are referred to in a slightly different way.

A look at education in the perspective of the requirements of modern times stems from the recommendations of the European Parliament and of the Council of the European Union of 18 December 2006 on key competencies for lifelong learning. Competencies are understood as a combination of knowledge, skills and attitudes appropriate to the situation. A set of competencies that are needed in the life of every citizen was identified. These key

competencies are those that are needed for self-fulfillment, personal development, social inclusion and employment.

Eight key competences include:

1) Communication in the mother tongue; 2) Communication in foreign languages; 3) Mathematical competence and basic competences in science and technology; 4) Digital competence; 5) Ability to learn; 6) Social and civic competences; 7) Sense of initiative and entrepreneurship; 8) Cultural awareness and expression.

A slightly different perspective accompanies the reflection on the competencies that are necessary for success in the labor market. An analysis of the dynamics of economic and social needs allows more explicit indication of competence against the dreams of young people and the challenges facing the modern world. The Institute for The Future (ITF) – nonprofit strategic research group undertakes research which identifies emerging trends and discontinuities that will transform global society and the global marketplace. The institute, which has operated for 40 years in California, developed a report in 2011 that analyzes the key factors affecting changes in the labor landscape (Davies, 2012). It also identifies the key skills that will be needed over the next 10 years. The report points to six key competencies that influence the development of the society.

1. Extreme longevity: Aging individuals will increasingly demand opportunities, products, and medical services to accommodate more healthy and active senior years.
2. Rise of smart machines and systems: We are on the cusp of a major transformation in our relationships with our tools. Over the next decade, new smart machines will enter offices, factories, and homes in numbers we have never seen before. They will become integral to production, teaching, combat, medicine, security, and virtually every domain of our lives.
3. Computational world: The diffusion of sensors, communications, and processing power into everyday objects and environments will unleash an unprecedented torrent of data and the opportunity to see patterns and design systems on a scale never before possible. Every object, every interaction, everything we come into contact with will be converted into data.
4. New media ecology: New multimedia technologies are bringing about a transformation in the way we communicate. As technologies for video production, digital animation, augmented reality, gaming, and media editing, become ever more sophisticated and widespread, a new ecosystem will take shape around these areas. We are literally developing a new vernacular, a new language, for communication.
5. Superstructured organizations: New technologies and social media platforms are driving an unprecedented reorganization of how we produce and create value. Amplified by a new level of collective intelligence and tapping resources embedded in social connections with multitudes of others, we can now achieve the kind of scale and reach previously attainable only by very large organizations. In other words, we can do things outside of traditional organizational boundaries. To “Superstruct” means to create structures that go beyond the basic forms and processes with which we are familiar.
6. Globally connected world: At its most basic level, globalization is the long-term trend toward greater exchanges and integration across geographic borders. Increased global

interconnectivity puts diversity and adaptability at the center of organizational operations. Presence in areas where new competitors are popping up is critical to survival, but it is not enough. The key is not just to employ people in these locales, but also to effectively integrate these local employees and local business processes into the infrastructure of global organizations in order to remain competitive.

These factors will affect the need for changes shaping new competences necessary for the future of the labor market.

There are skills which are significant important for the future workforce:

1. Sense making- ability to determine the deeper meaning or significance of what is being expressed
2. Social intelligence – ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions
3. Novell and adaptive thinking proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based
4. Cross-cultural competency – ability to operate in different cultural settings
5. Computational thinking – ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning
6. New-media literacy – ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication
7. Transdisciplinarity – literacy in and ability to understand concepts across multiple disciplines
8. Design mindset – ability to represent and develop tasks and work processes for desired outcomes
9. Cognitive load management – ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques
10. Virtual collaboration – ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team.

The report contains suggestions concerning possible changes and adjustments for the training, methods and competences the institutions of education at all levels should equip their graduates with.

- Placing additional emphasis on developing skills such as critical thinking, insight, and analysis capabilities
- Integrating new-media literacy into education programs, including experiential learning that gives prominence to soft skills – such as the ability to collaborate, work in groups, read social cues, and respond adaptively
- Broadening the learning constituency beyond teens and young adults through to adulthood
- Integrating interdisciplinary training that allows students to develop skills and knowledge in a range of subjects

Changes in the global economy and social organizations designated by IFTF point to the need to equip university graduates who enter the labor market with knowledge management competencies. Enterprises acknowledge and recognize the importance of the difference of tacit knowledge from explicit knowledge. “Tacit knowledge is the practical knowledge used

to perform a task, and it is also `the knowledge that is used as a tool to handle what is being focused on. Consequently, tacit knowledge is, in the business context: practical, action-oriented, experience-based, context-linked and personal, but not subjective or relative. It is objective, i.e. can be tested, checked, investigated empirically, in the sense that it is objective in its consequences. This means that the work done by using tacit knowledge can be tested for quality, durability, and reductions in the cost of production. Tacit knowledge is as real as explicit knowledge, but the processes to acquire this kind of knowledge, i.e. tacit knowing, rely on awareness of details which cannot be specified or tested in any known scientific way.”(Johannessen, Olaisen, Olsen, 2001).

Conclusion

Knowledge is becoming one of the main dimensions of the economy. The knowledge economy is the economic order in which knowledge, not labor, raw materials or capital, is a key resource, which should be a major factor in productivity, competitive advantage and economic growth. Knowledge here is the main source of wealth and the most important factor of production. The importance of personal knowledge or tacit knowledge of employees is recognized. It is knowledge that arises from practice – it is mainly operational knowledge, concerning the practical application of explicit knowledge in the process of creative problem-solving. The importance of knowledge in organization increases when it is exchanged. In the process of exchange it becomes personal or tacit knowledge. “The more tacit knowledge is shared, the harder is the imitation When tacit knowledge is shared and combined to become collective tacit knowledge, it would then lead to creativity and innovation The concept of tacit knowledge is very important in the context of innovation and its diffusion explain that tacit knowledge, hard to capture in the term ‘know-how’.”(Ngah, 2009).

Sharing knowledge requires all ten competencies on which the *Future Work Skills 2020* report indicated. This sets specific challenges for academic education. Personal knowledge is difficult to acquire in the process of institutional learning. However, one can prepare future knowledge employees to build tacit knowledge and equip them with the competencies to share it with others.

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