Potential of Creative Knowledge of Workers and their Development in a Sustainable Organisation

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Abstract:

Purpose: Creativity of knowledge workers is a strategic value for every organisation. This resource, in its nature and individual dimension, is a key competence as its effective use improves the value perceived by the customers, providing them with substantial benefits. In this article, an attempt was made to study selected organisation's conditions influencing development of creative knowledge workers. The main research objective was as follows: Using scientific procedures and applying proper methodology, the current status of selected organisation conditions and its impact on development of creativity of knowledge workers were investigated and determined

Design/Methodology/Approach: The consideration formed the basis for formulation of the research hypothesis: The more conducive the creativity and knowledge development oriented conditions of organisation growth, the higher the level of creativity and knowledge among the creative knowledge workers. To verify such a hypothesis, the results of the survey study conducted among persons having at least secondary education were used.

Findings: Creation of proper conditions in development of a sustainable organisation is conducive to development of the potential of creative knowledge workers. Proper implementation of this process allows such an organisation to achieve better effects in the form of an increased number of generated values in the future.

Practical Implications: Achieving the above development of a sustainable creative organisation becomes possible through identification of the potential of creative knowledge workers. Learning their competences and conditions strengthening these competences, so that knowledge and creativity develop, allows to form the conditions of the organisation to make them conducive.

Originality/value: The article was prepared based on own studies carried out in organisations employing knowledge workers. The obtained research results demonstrated which organisation conditions are most conducive to development of workers' creativity and knowledge. The obtained results will allow the organisations to focus on these elements to accomplish better results in the form of an increased number of innovations.

Keywords: Knowledge, knowledge worker, sustainable organisation, creativity, effectiveness

JEL classification: O15.

Paper Type: Research study.

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1. Introduction

In a knowledge economy, the turbulence of surrounding conditions as well as pace and unpredictability of ongoing changes make success-oriented organisations base their functioning on the resources of knowledge and creativity. Their objective is such formation of competences of workers being the sources of these resources that they contribute to increase of organisation's competitiveness. Therefore specialists having unique knowledge and creative potential as well as qualified managerial staff are of essence for such an organisation. The value of these workers for the sustainable development of the organisation results from knowledge and unique skills they possess and use as well as from the fact that they are the main promotors of changes and creators of new ideas, products or services. The prestige they enjoy in their professional environment is also of great significance. Their knowledge and skills allow for creation of key competences of a creative organisation, i.e. an organisation which - using creativity - is capable of crossing boundaries in value creation. Building such an organisation and emergence of a new type of employees, i.e. creative knowledge workers, is also connected with the changes of the nature of work performed by the managerial staff, including creative managers. Currently, it is focused on development of human capital as a strategic resource of the organisation, enabling it to compete effective on the extremely competitive market.

In connection with the aforementioned, to present a specific scientific area and analyse it, the article distinguishes two streams. One is of cognitive nature, concentrated on analysis of subject literature concerning issues regarding knowledge, knowledge worker and creativity. These studies allowed for a critical analysis and formation of the research framework. The conducted descriptive and cognitive considerations built the foundation for further analytical considerations. The other, study-based, stream focuses on the conducted survey study regarding various issues related to the conditions of development of knowledge and creativity in a sustainable organisation. The answers asked to the respondents related, inter alia, to knowledge management initiatives used in organisations, use of ICT, applied sources of knowledge, elements of organisational culture as well as actions taken by the superiors that influence the development of creativity and knowledge.

The data obtained from the study allowed to verify the hypothesis adopted in this article and the research objective.

2. Creative Knowledge Worker

P. Drucker was the first one to use the term *knowledge worker* to designate a worker who possesses the most important means of production, i.e. knowledge, in the book entitled *The Effective Executive* (1967). Even though this term has entered the language of science and practice of management and has been used for several decades, no single definition of the knowledge worker has been developed so far that would be commonly accepted by the representatives of science and business.

Definitions of knowledge workers encountered in literature reflect various approaches presented by their authors with regard to this issue (Davenport, 2005; Serrat, 2008; Gurteen, 2006; Morello, Caldwell, 2001; Nickols, 2017; Davenport, 2007; Howell, 2002; Drucker, 1999; Srzypek, 2009; Kieżun, 2003; Morawski, 2003; Perechuda, 2009; Surawski, 2019; Oleksa-Marewska, 2020). Some of them emphasise the essential meaning of education as a factor distinguishing the knowledge workers from others, other scholars give special attention to the traits and abilities possessed or attitudes presented by them, while others identify knowledge workers on the basis of actions taken by them and their effects.

In this article, a knowledge worker is identified as a person whose passion, work and professional career are associated with active participation in the knowledge management processes (knowledge localization, acquisition, development, sharing, use and preservation). Knowledge workers *have* (knowledge, experience, social competences, skills, values etc.), *want to* (develop, share and use knowledge, experience, social competences, as well as use resources, methods, tools etc.), *are able to* (use knowledge, experience, resources, methods, tools etc. thanks to their skills), *can* (are provided by the organiSation the opportunity to actively participate in the knowledge management processes) as well as *are needed* (their knowledge, experience, social competencies, engagement etc. are important for achieving the goals of the organisation) (Figurska, 2015).

A lot is required from knowledge workers in terms of the traits possessed by them, presented attitudes and behaviours as well as actions taken. In the knowledge based economy, particular significance is attributed to pro-active behaviours, creativity and innovativeness, leading to knowledge workers taking creative actions, characterised with originality and novelty, being a result of possessed in-depth knowledge, fluency and flexibility of thinking, openness to ambiguity ad uncertainty, risk taking and sensitivity. Knowledge employees taking such actions can be referred to as creative knowledge workers.

Table 1. *Creative knowledge worker identification*

Characteristics of a creative knowledge worker
High level of specialist and general knowledge, high degree of expertise, deep and unique skills, high level of education, very wide potential, considerable experience, specialization in profession, awareness of own strengths and possibilities, strong sense of self-worth,, being well-informed, appropriate system of values, persistence in striving for a goal
Behaviours and attitudes of a creative knowledge worker
Responsibility (for oneself, own decisions, actions and achieved results), curiosity about the world and inquisitiveness, independence in making decisions and actions, openness to changes, flexibility in action, proactive behaviour, creativity and innovativeness, high level of inner motivation, orientation towards continuous learning, high expectations of oneself and others, focusing on overcoming of the arisen obstacles and breaking barriers, high level

of engagement in work, respect for other people, trust, tolerance and mobility

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Requirements imposed on a creative knowledge worker

Taking actions on knowledge and on the basis of knowledge, full involvement in work and loyalty towards the organiSation, understanding and shaping their own domain (of influence, knowledge, activity, responsibility), making wise decisions within their domains, thinking and acting effectively, making full use of their minds as their primary work tool, effective solving of emerging problems, significant contribution to the creation of added value in the organisation, perceiving and using of emerging opportunities, protecting the organisation against various types of threats appearing in the environment, building a relationship networks with other knowledge workers in and outside the organisation

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Source: *Prepared by the authors on the basis of: Davenport, 2005; Serrat, 2008; Gurteen, 2006; Morello, F. Caldwell, 2001; Nickols, 2012; Nickols, 2017; Davenport, 2007; Howell, 2002; Drucker, 1999; Figurska, 2019; Mikuła, 2010; Skrzypek, 2009; Sokół, 2015; Kaufman, 2011; Dacey and Lennon; 2000; Ashby et al., 1999; Shalley et al., 2004; Dreu et al., 2014; Torrance, 1974; Gaižauskienė, Tunčikiene, 2016, Abella; Arvizu, 2019.*

Subject literature indicates clearly that creative knowledge workers are one of the most important resources of the organisation (Sherringham and Unhelkar, 2020; Figurska, 2019; Cortada, 2017; Turriago-Hoyos *et al.,* 2016; Wilson, 2017; Wright *et al.,* 2017; Gaižauskienė and Tunčikiene, 2016; Nickols, 2017; Sobocka-Szczapa, 2020). The market success of the organisations depends, to a great extent, from work and abilities of knowledge workers. The scope of competences possessed by creative knowledge workers as well as their skilful use have a pro-active and pro-creative impact not only on the organisation as a whole, integrating the actions taken, but also have an effective impact on the attitudes of other workers.

To summarise, the creative knowledge worker is responsible for the work contribution and its creative effectiveness as well as impacts the organisation's capability to have such achievements. The creative knowledge worker strives to broaden his/her knowledge, both general and specialised. Interests of a creative knowledge worker are often an internal motivator to perform work and knowledge allows performing them at the required level so that the effect of human work has proper creative dimensions.

3. The Essence of Potential of the Creative Knowledge Worker

Human potential is defined as a set of positive and negative, used or unused, explicit or tacit traits and competences of an individual (Blašková and Grazulis, 2009). The most important elements of human potential include: intellect, personality traits, social intelligence, health and physical condition, spiritual intelligence and values followed. These elements are closely dependent and interpenetrating.

In the case of a creative knowledge worker, special significance must be assigned to these components of his/her potential that determine creativity and taking creative

actions. Such an element is the human intellect, comprising closely interrelated and interpenetrating elements, such as: knowledge, skills and experience.

Knowledge is understood as "*a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating incorporating new experiences and information. It originates and is applied in the minds of knowers*" (Davenport and Prusak, 1998). Knowledge is a specific, strategic resource created, shared and used in practice by people. Thanks to them, concepts oriented at improvement of products and services or incorporated into processes and procedures are created. Knowledge is als incorporated in other resources, contributing to their formation and decisive in terms of their commitment. Knowledge allows to make proper decisions and take the right actions, it accelerates and facilitates implementation of innovations, reaction to changes in the broadly understood surrounding, facilitations creation of own innovative solutions. Knowledge enables the workers to set outside their comfort zone and see opportunities where others cannot see them (Marchiori and Franco, 2020).

Knowledge is a heterogeneous resource (Polanyi, 1966; Nonaka and Takeuchi, 1995; Sveiby, 1997; de Jong and Ferguson-Hessler, 1996; Głuszek, 2004). Every person has explicit and tacit knowledge. Explicit knowledge is relatively easy to express (with words, symbols, formulas, etc.) and share with others. This knowledge is in the individual's mind, in personal notes, files, instructions, etc. On the other hand, it is very difficult to express and share tacit knowledge which is located in the human mind. This knowledge originates from the unique combination of the abilities, experience, moral principles, level of sensitivity, intuition and convictions of the person. Therefore, it is more personal and less accessible that explicit knowledge.

The knowledge possessed by people can be also divided into knowledge of facts (know what), knowledge regarding the ability to perform specific tasks or activities (know how), knowledge allowing for interpretation, assessment and forecasting of results (know why), knowledge of who possesses knowledge important for the given individual - and how to access this knowledge (know who) as well as knowledge regarding the market (know where, know when) (Lundvall and Johnson, 1994).

A. Tiwana (2000) proposed organisational knowledge classification that can be also applied to the individual knowledge of a worker. *Core knowledge* is necessary to be involved in the given activity, *advanced knowledge* distinguishes the given worker from others and enables him/her to compete effectively on the market, and *innovative knowledge* distinguishes the given knowledge worker from others, giving him/her the position of an expert in the industry. As other workers gain the innovative knowledge of the expert, it becomes more common over time, reaching the level of advanced knowledge and then becoming the core knowledge.

The above described classifications are interpenetrating and complementary. Along with increase in difficulty in answering the subsequent questions: what? why? how?, the component of tacit knowledge that allows to answer them increases. On the other hand, core knowledge is explicit knowledge to a greater extent, while innovative knowledge is mostly tacit knowledge. In the case of creative knowledge workers, special meaning should be attributed to know why, know how and know who type tacit knowledge which, combined with other types of knowledge, experience, etc., leads to innovative knowledge forming the basis for creative actions.

Abilities mean predispositions of the given person to easily master certain skills. The abilities of creative knowledge workers translate into greater opportunities for advanced accomplishments in the mental, creative, artistic and similar fields. These opportunities result from the fact that workers possessing the said abilities master the given activity better than those who do not possess them. First and foremost, creative knowledge workers are expected to learn easily and have creative abilities, connected with possession of creative imagination and divergent thinking. Possessing these abilities is expressed by effective, independent and creative action and by the effects of human activity, i.e. creative work. In other words, the abilities of the creative knowledge worker are identified through his/her achievements and ways of reaching them (Perkins, 1981; Amabile, 1983; Dacey and Lennon, 2000; Kaufman, 2011; Franková, 2011; Igielski, 2017).

Experience usually means the overall information and skills gained on the basis of observation and own experience. It is a collection of all actions (e.g. internships, professional training, previously performed work) taken in life that contributed to improvement of qualifications of the person in the given profession.

Knowledge, skills and experience are strongly interrelated. The great the knowledge, skills or the experience, the more opportunities for a unique combination of these elements in the process of creation of a creative work.

The human traits determine the relatively stable, unique method of his/her thinking, acting and feeling. Subject literature frequently describes the knowledge workers in terms of the traits they should demonstrate. Taking into account the specifics of the knowledge worker and the specifics of creative actions, creative knowledge workers should be characterised mainly with openness, independence and persistence (Sokół and Figurska, 2017). *Openness* to new experiences and ideas allows people to perceive the surrounding in an unrestricted and non-schematic manner. This trait facilitates learning, enables the worker to step outside his/her routine in the process of searching for original problem solutions that other often cannot see at all as well as allows to notice opportunities where others see only a threat (Shalley *et al.*, 2004). *Independence* is expressed in self-reliant decision-making and taking actions in the process of realisation of a creative work. Independence enables people to cross the barriers imposed by others and makes them resistant to external attempts of pushing them back into commonly applied and accepted frames of mind and action.

Persistence means passion and consistent aiming at the set goal, even if the path is difficult. This goal or the adopted method of its accomplishment may, however, change suddenly and unexpectedly along with the progress of the creative process, leading to accomplishment by the knowledge worker of results other than expected, but original and valuable (Dacey and Lennon, 2000; Borawski, 2016).

Social intelligence regards relations of a person with other people (Albrecht, 2006; Goleman, 2007). Manifestations of possession of social intelligence, particularly important in the process of creation of creative works by knowledge workers, include, without limitation, the ability to establish and maintain relations with people, significantly facilitating the process of knowledge sharing and acquiring it from others; ability to present one's views and influencing others which makes convincing others to new, original, valuable solutions easier; ability to communicate, including communication of one's own needs, which facilitates acquisition of resources necessary in the process of creation of creative works; ability to set boundaries, having a positive effect on maintenance of the creator's independence, so important in the process of creation; ability to work in a group as it is the group that often becomes the incubator of new concepts and ideas.

Health and physical condition are frequently ignored or underestimated elements of human potential. It must be, however, noted that they have a positive effect on the state of mind and broaden the range of possibilities in terms of realisation of one's own potential, overcoming barriers and accomplishing goals.

Spiritual intelligence is described "*as a set of capacities and abilities that enable people to solve problems and attain goals in their everyday lives*" (Emmons, 2000). *Values* allow the person to determine what is good, important, rational, worth learning or doing - and what is not. Both these potential elements have an impact on decisions and actions taken by the worker, thus having effecting on his/her potential.

The level of particular elements composing the worker's potential may differ from person to person. This means that - firstly - the potential of every person, being the resultant of the levels of its particular elements, is unique and - secondly - that an individual can have a greater or lower potential and, thus, it is gradable. The level of the particular elements of potential can be, however, impacted (e.g. by gaining new knowledge, experience, etc.). This means that it can be developed which is extremely important in the aspect of management of creative knowledge workers.

4. Development of Potential of the Creative Knowledge Worker

Development of potential of the creative knowledge worker consists in the said worker taking, over a long period of time, aware, intentional, systematic and individually selected actions, oriented at the elements of the individual's potential, aiming at broadening and/or deepening of the individual's knowledge, attitudes, development of motivation and skills as well as improvement of physical and mental

condition. As results from the above definition, development of human potential must be aware, directed, it is time-consuming and requires taking diversified and individually adjusted actions.

The worker him/herself has an impact on his/her potential, making the decisions on the actions oriented at development of the potential. This impact is also exerted by the extra-organisational surrounding in the form of family, friends, etc. who provide support and are the first reviewers of his/her plans, goals and decisions made as well as by the organisation in which the given person works. Further considerations focus on the impact of the organisation on the development of workers' potential.

A creative organisation not only can but even must stimulate and direct the actions oriented at development of the potential of creative knowledge workers in a manner adjusted to the needs of sustainable development of the organisation. Only such a potential can be fully used for the benefit of the worker and creative organisation. Therefore, high significance must be attributed to optimisation of the process of development of knowledge workers' creative potential, understood as determining the best method of potential development in the given circumstances and from the point of view of the assumed criterion (e.g. maximisation of the worker's potential and best adjustment of the worker's potential to the needs of the organisation, etc.).

Development of a sustainable creative organisation based on the properly employed potential of creative knowledge workers results from the vision, mission and strategy of the organisation. Realisation of the adopted strategy requires engagement of various resources, including but not limited to strategic resources, determining the possibility of accomplishment of strategic goals by the organisation. Therefore, identification and classification of all resources of the organisation and, subsequently, determination which of them are strategic resources, i.e., which are valuable, exceptional, difficult to replace or imitate, is key for implementation of the strategy. In a creative organisation functioning in a knowledge economy, such a resource is the broadly understood potential of workers, mainly their knowledge.

The subsequent step is verification the potential that workers have today and what potential they should have to enable implementation of the strategy and accomplishment of the strategic goal of the organisation. Comparing the potential possessed by the workers with the one expected from them allows to identify the potential gap and/or surplus in its various elements (e.g., knowledge, experience, skills, etc.). If there is a potential surplus in the organisation, the possible ways of its utilisation for the benefit of the creative organisation must be considered. However, if a gap in workers' potential is identified, the goal and plan of its elimination must be set. This plan provides for tools, processes and initiatives the implementation of which will allow for directed development of the workers' potential, aiming at its adjustment to the needs of the organisation in this scope.

Figure 1. *Impact of the organisation on the development of workers' potential*
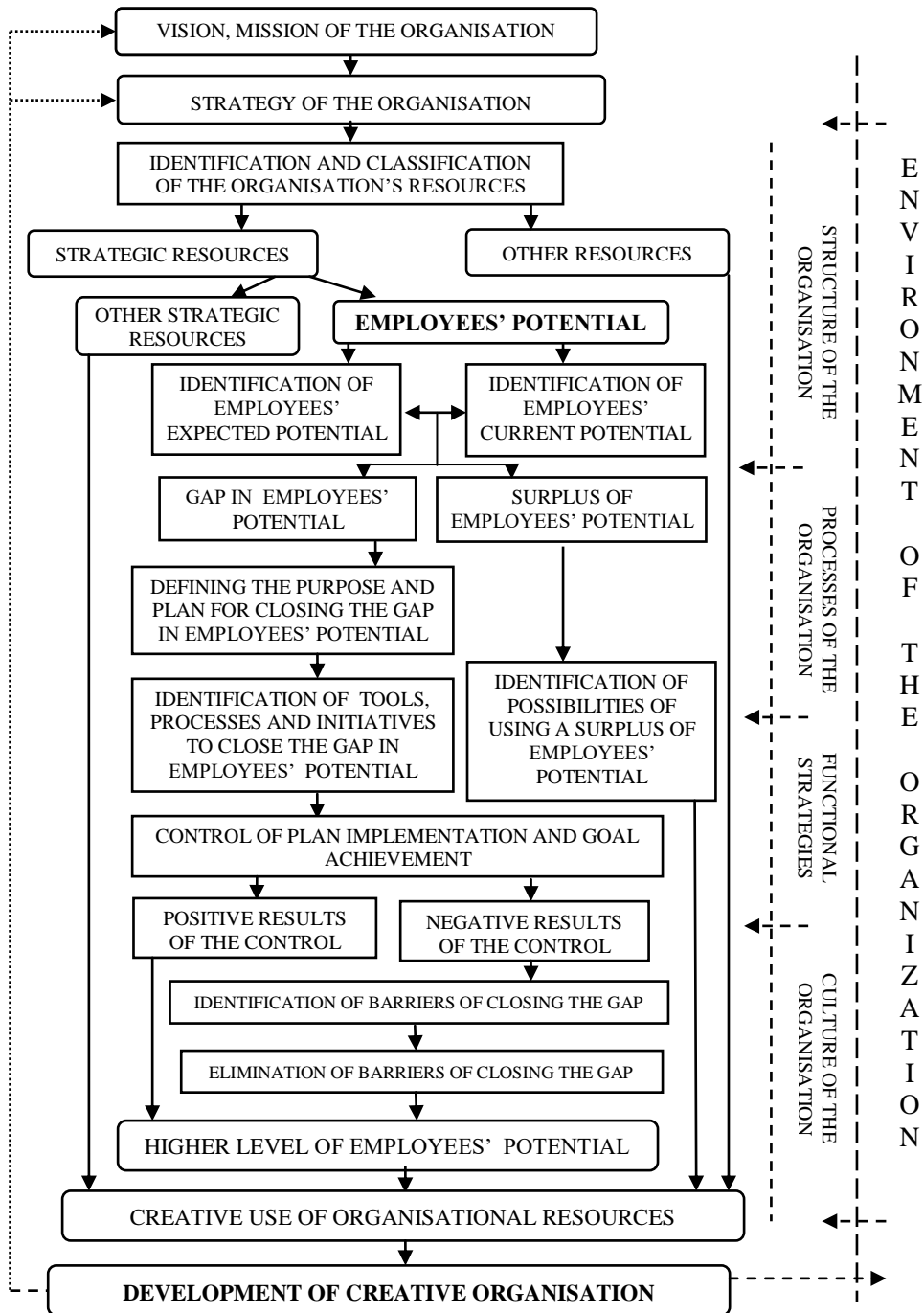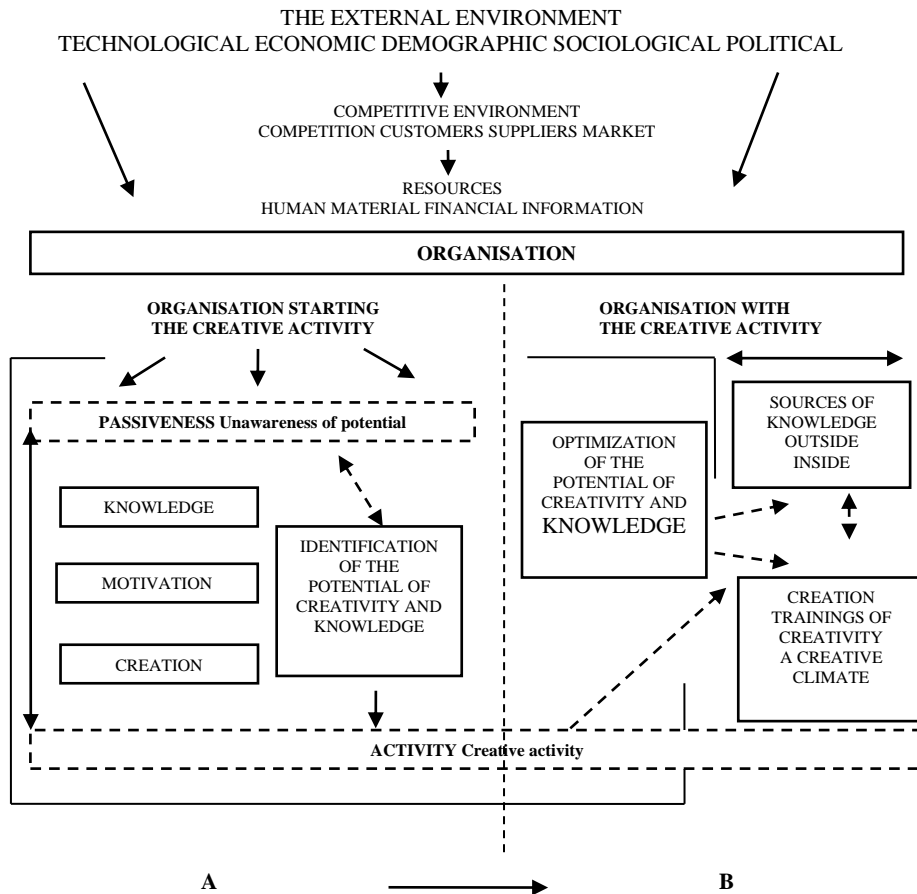
Implementation of the plan aiming at elimination of the potential gap must be systematically monitored. If the effects of the actions aiming at elimination of the workers' potential gap taken in the organisation are unsatisfactory, the barriers hindering accomplishment of the set goal must be identified and actions must be taken to remove them. However, if the potential gap is eliminated as a result of actions taken, it means a development of potential of the organisation workers. Higher and, at the same time, organisation-adjusted potential of the knowledge workers expands the range of possibilities in terms of creative combination and use of all resources of the organisation which, in turn, leads to development of the creative organisation and reinforcement of its market position. The consequence of this situation may be, however, the necessity to change the vision and mission of the organisation and/or its strategy.

All decisions and actions regarding development of the workers' potential and its creative use take place in specific conditions developed under the effect of the internal surrounding (structure of the organisation, organisational processes, functional strategies, culture of the organisation) and external surrounding which provides the organisation with resources (human, information, material and financial) and creates the conditions (legal, economic, technological, social and cultural, etc.) for the functioning of the creative organisation in the knowledge economy. On the other hand, a developing creative organisation can also have influence on the surrounding. For example, creative works (products, procedures, etc.), being an effect of creative use of resources of the organisation, can be so good that they become a standard in the industry and/or give the organisation a competitive advantage on the market.

It must be noted that the impact of a sustainable organisation on the development of the potential of a creative knowledge worker depends on whether the entity is or is not strictly and permanently oriented at gaining benefits from creativity and on whether the organisation has only started entering the market or has been already functioning on it. In organisation commencing works on creation of creative solutions (that have only commenced their business activity or are in transformation), it is important to verify what human capital resources they have and/or should have. It is necessary to identify the individual creative potential and knowledge of every employed worker (Figure 1 part A of the model) and, subsequently, upon assessment and selection of the most creative individuals possessing specific knowledge (including specialised knowledge), to adapt the organisation's structure to work on tasks of creative nature.

The next stage is transition of the organisation (to achieve the effect of sustainability) from the passive phase to the creative activity. This process is realised both at the individual and collective levels. Another important element of the model indicates the necessity of identification of workers' motivation and the need to direct them properly, apply trainings in creativity and ensure continuous development of knowledge to reinforce and develop this potential.

Figure 2. *Model of identification of the creative potential of the knowledge worker*

THE EXTERNAL ENVIRONMENT
TECHNOLOGICAL ECONOMIC DEMOGRAPHIC SOCIOLOGICAL POLITICAL

COMPETITIVE ENVIRONMENT
COMPETITION CUSTOMERS SUPPLIERS MARKET

RESOURCES
HUMAN MATERIAL FINANCIAL INFORMATION

ORGANISATION

**ORGANISATION STARTING
THE CREATIVE ACTIVITY**

**ORGANISATION WITH
THE CREATIVE ACTIVITY**

PASSIVENESS Unawareness of potential

KNOWLEDGE

MOTIVATION

CREATION

IDENTIFICATION
OF THE
POTENTIAL OF
CREATIVITY AND
KNOWLEDGE

OPTIMIZATION
OF THE
POTENTIAL OF
CREATIVITY AND
KNOWLEDGE

SOURCES OF
KNOWLEDGE
OUTSIDE
INSIDE

CREATION
TRAININGS OF
CREATIVITY
A CREATIVE
CLIMATE

ACTIVITY Creative activity

A   B

Source: Own elaboration.

The situation looks different when the organisation builds its value based on creativity which is the main source of broadly understood benefits (part B of the model). In such an organisation, creative workers with an expert knowledge and experience are sought for from the very beginning. A sustainable organisation knows its needs and selects resources accordingly, so that the said resources yield the highest benefit possible. In this organisation development of creativity of the worker through knowledge development and creativity training is of significance. There is no need for the worker to transition from the passive to the active phase as it was employed upon verification of work experience in creative organisations. Such a worker is aware of own potential and of what he/she can offer the employer. He/she is also aware of the need for systematic development of creative potential. At this stage, the incentivising processes must be reinforced as improper encouragement of the worker may cause a decline in his/her creative capacities.

Thus, a question arises: when taking care of its sustainable development, how can an organisation stimulate it through various elements of development of potential of creative knowledge workers? The role of such an organisation in this scope is mainly creation of appropriate conditions for the workers (physical, organisational, cultural) for the development of their potential as well as proper management of the workers. Physical conditions regard mainly the location of the workplace, workstation equipment, lighting, noise level, etc. These conditions must provide the worker with security, possibility to perform his/her work and comfort (Lerdahl, 2001).

An organisational condition worth emphasising is the impact of the organisational structure on the workers' potential development opportunities. A stiff hierarchic structure is not conducive to open communication and knowledge sharing, it also causes difficulties in conveying the idea to those who can make the decision on using them. Therefore, from the perspective of opportunities for development of the workers' potential, a flat, flexible and little-formalised structure is better (Williams, 2001; George, 2007).

The organisation's culture reflects its own, internally developed method of functioning, determining such elements as workers' behaviour, conflict resolution methods, promotion rules, etc. The culture of organisations relying in their competitiveness on knowledge and creativity must be based on trust, cooperation and be conducive to continuous learning. In particular, this culture should bring awareness of the significance of knowledge, encourage learning, be conducive to knowledge sharing, give the sense of community, support openness and honesty, be conducive to pro-active attitudes, support creativity and innovativeness, create an appropriate atmosphere for challenging, experimenting and searching, promote team work, give freedom of action, support diversity and tolerate mistakes to a reasonable extent. It must be emphasised that values, norms and principles absorbed by the workers from the organisation's culture in the process of the so-called acculturation are reflected in the decisions and actions taken by them, becoming an element of their potential (Robbinson and Stern, 1997; Pawłowski, Kułakowska, and Piątkowski, 2019).

Proper, rather value-driven than traditional, management of workers in the organisation has an essential impact on the development of potential of creative knowledge workers. In particular, attention must be given to incentivising activities oriented at knowledge and creativity development, proper organisation of workers' work ad leadership.

Incentivising actions should focus mainly on: recognition and appreciation of workers' achievements, providing them with opportunities to develop their knowledge, experience and skills (including but not limited to trainings, courses, workshops, professional training, team work, access to knowledge sources) and offering the knowledge workers promotion opportunities (Ekvall, 1996).

Proper organisation of work of creative knowledge workers requires ensuring compatibility of knowledge possessed by the worker with his/her abilities and allowing for social contacts (including teamwork) conducive to knowledge sharing, gaining experience, creation of new ideas and their preliminary verification in the group of specialists. One of the basic barriers for creativity is routine. Therefore, introduction of changes and ensuring professional challenges for workers have a positive effect on development of the elements of their potential that are conducive to creativity. Creation of a creative work is not a process that can be fitted into specific working hours of a worker and instructions issued by their superior. Therefore, ensuring the possibility to regulate one's working rhythm and allowing independence in making decisions and taking action regarding the performed work will surely be appreciated by the creative knowledge workers and will be reflected in the effects of their work (Holford, 2019).

It is also very important to apply proper leadership based on mutual trust and respect, subjective treatment, open and sincere communication and the superior's authority resulting not only from their position, but first and foremost from their knowledge and experience, the decisions and actions they take and the attitudes and behaviours they demonstrate (Mikuláštík, 2010; Zgoda *et al.*, 2017).

A substantial part of the impact of the organisation on individual elements of the creative potential of the knowledge worker is the impact on the development of knowledge and experience of the worker. The development of knowledge is achieved by, for example, allowing the worker to learn using the methods they prefer, allowing interpersonal contacts conducive to knowledge exchange and providing the worker access to internal and external sources of knowledge. An example of activities targeted at the development of experience can be a professional training in a reputable organisation being the leader in the industry or allowing the worker to work in different departments of the organisation before they go to the target department, which will allow them to see their contribution in the activities of the organisation, for instance (Nijstad and Stroebe, 2006; Holford, 2019).

The effect of the organisation on the personality traits of the worker is limited, but they can somewhat be shaped by participation in specialised workshops or work under the supervision of a coach or a mentor. The role of the organisation rather seems to be good identification in the process of recruitment and selection of people with desirable traits from the point of view of the organisation and their subsequent use in the working process.

The organisation has a greater impact on the skills resulting from possession or lack of social intelligence. Communication skills, teamwork skills or the skill of setting boundaries can be shaped for instance by organising specialised workshops for the employees whose social intelligence is below the level allowing satisfaction of the needs of the organisation (Sokół, 2015).

Moreover, the organisation can also have an effect on the health and physical fitness of its workers for instance by buying them swimming pool or gym memberships, organising joint activities (e.g. a cycling excursion, hiking and trekking tours etc.). Such activities are not only favourable to the health and fitness of workers, but they also integrate them, building a bond with the organisation, which has a positive effect on their involvement in work.

The spiritual intelligence is an element of the worker's potential which the organisation should not try to impact but merely use in the creation of creative work as an element of widely understood diversity in the organisation. On the other hand, the organisation influences the values of the worker through the above described acculturation.

5. Identification of Development of a Creative Knowledge Worker in Sustainable Development of an Organisation - Research Results

Material and methods:
The study was addressed to employed persons, having at least secondary education and considered creative knowledge workers. 445 persons participated in the study. The spatial scope of the study covered the Słupsk sub-region, located in the central part of Central Pomerania in northern Poland. The results of the study allowed, inter alia, to determine the method of identification of development of creativity of knowledge workers in a sustainable organisation.

A lot of organisations implement and use difference initiatives of knowledge management, use various information and communication technologies etc., but not always with awareness that they make knowledge management easier for the organisation and the workers, thus contributing to developing their potential. Nevertheless, it must be pointed out that a creative knowledge worker has their own creative potential and its identification is a prerequisite for optimising the activities implemented in the organisation which aim to develop that potential.

Analysing the obtained results of the conducted survey study, emphasis was placed on selected issues concerning knowledge management which, according to the Authors of the article, support - directly or indirectly - the development of creative knowledge workers. They include: selected structural-and-organisational and cultural aspects, applied leadership, initiatives of knowledge management, used sources of knowledge as well as ICT used in the performance of knowledge management.

Bearing the aforementioned theoretical consideration in mind and working on the research assumptions, it was assumed that: *using scientific procedures and applying proper methodology, the current status of selected organisation conditions and its impact on development of creativity of knowledge workers were investigated and determined.*

Results and discussion:
As already mentioned earlier in this article, organisational culture is a very important element of the organisational work environment. Such elements of the organisational culture as trust, cooperation and open, unhampered communication are the most important factors determining implementation of the knowledge and information sharing process, contributing to increase in the knowledge resources of the organisation and increasing the potential capability of using them creatively. Thus, it seemed interesting to see how the respondents evaluate trust, cooperation and communication with the superiors, inferiors and co-workers and, therefore, they were requested to evaluate the specified organisational culture elements, awarding them points, where 1 point was the lowest score and 5 points the highest.

In the light of the results of the study, trust, cooperation and communication were given the highest number of the highest scores (5 points) in relation to co-workers, whereas the lowest number of those - in relation to the inferiors. On the other hand, the highest number of the lowest scores (1 point) in relation to the particular elements of the organisational culture were granted to: trusting the superiors, cooperation with superiors and communication with the superiors.

Table 2. *Selected elements of the organisational culture conducive to knowledge management in organisations*

Elements of the organisational culture	Ponts					no answer
	1	2	3	4	5	
	in %					
Trust						
trust in co-workers	2.9	11.5	26.3	28.1	24.7	6.5
trust in superiors	5.6	8.3	23.1	31.5	23.6	7.9
trust in subordinates	1.7	3.4	8.3	48.3	13.3	25.0
Cooperation						
cooperation with co-workers	0.5	3.8	20.5	38.4	26.7	10.1
cooperation with superiors	4.5	9.0	25.8	27.6	22.5	10.6
cooperation with subordinates	1.7	3.4	11.7	56.7	13.3	13.3
Cooperation of workers, mutual encouragement and exchange of information are an advantageous determining factor for development of creativity.						
Communication						
communication with co-workers	1.6	5.6	14.2	38.4	29.0	11.2
communication with superiors	3.8	11.5	16.9	33.7	22.9	11.2
communication with subordinates	0,0	0,0	5,0	66,7	8,3	20,0

Source: *Own study.*

Managers play a special role in the process of development of creativity of workers engaged in implementation of the knowledge management processes in organisations and, thus, the next question described various activities and behaviours of the superiors and the respondents were asked to indicate if and to what extent those were true. The respondents had to award points to the particular statements,

where 1 point meant: I do not agree with this statement at all, whereas 5 points meant: I fully agree with this statement. All replies are presented in Table 3.

Over 1/4 of respondents indicated that they are definitely treated with respect by their superiors, whereas nearly 1/5 of responding knowledge workers definitively confirmed the fact that their superiors take care of their development and use their knowledge and experience fully.

Table 3. *Superiors and actions taken by them having effect on development of creativity of creative knowledge workers in the investigated organisations*

Superiors	Points					no answer
	1	2	3	4	5	
	(in %)					
take care of their employees' development	17.5	13.5	23.6	17.3	19.1	9.0
share own experiences with their employees	11.5	14.6	20.7	25.8	17.3	10.1
mobilize the staff to cooperate by their own actions	16.4	16.9	24.0	15.7	16.4	10.6
take notice and award successes of employees	21.3	14.9	28.1	15.3	14.0	6.4
encourage employees to be creative and innovative	22.9	16.6	22.0	13.5	14.2	10.8
treat their subordinates with respect	11.9	11.2	18.0	23.2	26.3	9.4
give employees large autonomy in their actions	12.8	13.0	22.9	23.2	16.9	11.2

Source: *Own study.*

On the other hand, nearly 23% of responding knowledge workers declared that their superiors do not encourage creativity and innovation at all, which is symptomatic and very alarming in the aspect of formation of an organisational work environment conducive to development of creativity. Furthermore, every fifth respondent confirmed that the superiors do not recognise or award the successes of their employees in their organisations which is highly discouraging and is not conducive to their creativity.

The obtained results of studies on the applied initiatives of knowledge management having a positive effect on the creativity of knowledge workers allowed organising knowledge and drafting a ranking of the most frequently used initiatives. These include (Table 4) collection and analysis of employees' ideas, internal trainings/workshops, external trainings/workshops, creating teams of knowledge involved in development of KM methods and tools, coaching, mentoring, creation of so-called chat rooms or other meeting places for employees, securing professional press and publications for the employees, cooperation with research institutes, universities, linking motivation system with knowledge sharing, participation in conferences, seminars, organizing so-called brainstorming.

Table 4. *Knowledge management initiatives and their impact on creativity of creative knowledge workers in the investigated organisations*

Knowledge management initiatives	Use of KM initiatives
	In (%)
internal trainings/workshops	62,9
external trainings/workshops	48,3
participation in conferences, seminars	30,3
collection and analysis of employees' ideas	60,2
organizing so-called brainstorming	36,6
sharing knowledge acquired during trainings / conferences with other employees	21,3
creation of chat rooms or other meeting places for employees	24,3
securing professional press and publications for the employees	24,7
coaching	14,6
cooperation with research institutes, universities	12,4
linking motivation system with knowledge sharing	11,5
mentoring	8,3

Source: *Own study.*

The initiatives of knowledge development, which determine the development of creative knowledge workers, are directly related to the origin of knowledge and the types of technologies used to acquire and share that knowledge.

There are a number of internal and external sources, from which knowledge workers can draw the knowledge they need to use it creatively at work. To identify sources of knowledge, which they use most frequently, respondents were asked to assign points from 1 to 5 to the sources listed in the question, where 1 point meant: *I don't use this source of knowledge*, and 5 points meant: *I use this source of knowledge very often*. Then, for each source of knowledge an average frequency of its use was calculated (Table 5).

Table 5. *Internal sources of knowledge and their application*

No.	Internal sources of knowledge	Average rating
1.	the closest co-workers	3,87
2.	employees of other departments	2,78
3.	superiors	3,37
4.	internal instructions, manuals and regulations	3,05
5.	Intranet	2,27
6.	internal communication platforms	2,15
7.	staff meetings (notes)	2,49

8.	database containing employees' experiences and skills	1,97
9.	database of reports on tasks and projects	1,97
10.	documents database segregated by thematic categories	2,06
11.	service operating as a discussion group	1,82

Source: Own study.

Considering the internal sources of knowledge, respondents most often used the knowledge of their closest co-workers, superiors, as well as internal instructions, manuals and regulations. On the other hand, such knowledge sources as: service operating as a discussion group, containing the employees' experiences and skills, a database of reports on tasks and projects and internal communication platforms, were used very seldom by knowledge workers.

In a situation when the organisation's knowledge resources are insufficient, knowledge workers ca take advantage of external sources of knowledge (Table 6).

Table 6. *External sources of knowledge and their application*

No	External knowledge sources	Average rating	No	External knowledge sources	Average rating
1.	seminars, conferences	2.02	13.	consulting companies	1.47
2.	legislation	2.53	14.	knowledge brokers	1.32
3.	exhibitions	1.59	15.	market research agencies	1.42
4.	sharing best practices	2.01	16.	research institutes, universities	1.84
5.	business intelligence	1.71	17.	politicians	1.30
6.	external knowledge databases	2.06	18.	media	2.53
7.	professional publications	2.23	19.	Internet	3.68
8.	customers	3.08	20.	patents	1.63
9.	suppliers	2.57	21.	software	2.39
10.	cooperating organisations	2.33	22.	patterns, projects	2.24
11.	business competitors	2.05	23.	people from outside the organisation (potential employees)	2.12
12.	informal contacts	2.36			

Source: Own study.

Considering external knowledge sources (Table 6) listed in the question, the Internet, cooperating organisations, customers, professional publications, software and legislation were the most commonly used by the respondents. On the other hand, the least popular external sources of knowledge among respondents include knowledge brokers, politicians, market research agencies, patents, exhibitions and consulting companies.

With reference to ICT, study results indicate that in the investigated organisations the knowledge workers most often used the following information and communication technologies: Internet, Datbase, document management systems, e-learning, teleconferencing, organisational KM computer systems, CRM systems, videoconferencing. Employment of the above specified technologies in the practice of the organisation is definitely conducive to development of creativity of knowledge workers. However, it needs to be pointed out that organisations rather rarely use the ICTs of high significance to the development of creativity as mentioned in the question. These technologies include, without limitation, decision support systems, group work supporting systems (groupware), experts databases (yellow pages), best practices databases, knowledge experts localization systems.

Table 7. *Technologies Knowledge and applied technologies as well as their impact on creativity of creative knowledge workers in the investigated organisations*

The technologies known to respondents								
No	Type of technology	used	not used	in total	No	Type of technology	used	not used	in total
1.	Internet	95.5	4.0	99.5	12	experts databases (yellow pages)	14.2	42.2	56.4
2.	Intranet	23.1	34.4	57.5	13.	best practices databases	14.2	41.1	55.3
3.	Extranet	6.7	39.8	46.5	14.	decision support systems	16.0	39.6	55.6
4.	Databases	67.4	20.7	88.1	15.	document management systems	51.7	21.1	72.8
5.	corporate portals	27.0	45.4	72.4	16.	group work supporting systems	19.1	37.5	56.6
6.	query distribution systems (FAQ)	18.9	46.3	65.2	17.	artificial intelligence systems	7.4	45.4	52.8
7.	e-learning	35.1	41.6	76.7	18.	knowledge experts localization systems	11.2	40.0	51.2
8.	integrated management systems (MRP/ERP)	11.9	43.4	55.3	19.	organisational KM computer systems	26.5	26.7	53.2
9.	CRM systems	25.8	39.3	65.1	20.	teleconferencing	27.0	48.3	75.3
10.	content management	16.2	37.3	53.5	21.	videoconferencing	24.0	49.7	73.7
11.	systems (CMS)	16.2	37.3	53.5	-	-	-	-	-

Source: *Own study.*

The correct and effective performance of creative processes by creative knowledge workers leading to strengthening their creative potential in the organisation requires

well-established creativity-promoting standards. Experience shows that leaders and managers should support ideas of new team members in particular and create work conditions conducive to development.

6. Conclusions

Creativity of the knowledge workers as well as its significance and sustainable development in organisations as a research category in management sciences has recently become extremely popular, inspiring scholars to identify further scientific areas and contribute to the development of this issue. Despite that, this concept is still insufficiently identified, both in theoretical and empiric terms. The analyses presented in the subject literature refer both to qualitative and quantitative studies, extending and increasing knowledge on this issue, so important for development of a contemporary organisation.

The results of the conducted survey study presented in this article confirmed that the organisational work environment requires taking a number of actions oriented at such its formation that it is conducive to development of creativity and knowledge of workers in the sustainable development of organisations. In particular, these actions should be oriented at:

- building an organisational culture based on trust, cooperation and open, honest communication conducive to knowledge sharing, tolerating mistakes to a reasonable extent,
- proper work organisation, giving the knowledge workers time for thinking, discussions, sharing knowledge with other employees,
- organisation of trainings and broad access to knowledge for the employees,
- dignity-oriented management of knowledge workers, based on values and mutual respect.

A special role in the process of creation of the organisational work environment conducive to development of creativity must be attributed to the managers who, through the decisions they make and actions oriented at building of such an environment, take care, in the context of long-term development, of progress and innovativeness, thus having effect on generation of added value in the future. Thus, this study investigates the initiatives of knowledge management used in knowledge-based organisations. To conduct an in-depth analysis of the issue at hand, asking the respondents for indicating the initiatives most often adopted in their establishments was accompanied by the analysis of those initiatives for their impact on the creative behaviour of workers. The positive hypothesis was proven: the more conducive the creativity and knowledge development oriented conditions of organisation growth, the higher the level of creativity and knowledge among the creative knowledge workers. The adopted research objective was also successfully accomplished.

Creativity of knowledge workers is a complex issue. This article is not exhaustive with regard to its subject, but is a basis for further considerations on development of knowledge and creativity in sustainable development of an organisation.

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