LEADERSHIP CHALLENGES IN THE CONTEXT OF WEB 2.0 SOLUTIONS

Kozłowski R., Kania K.[∗]

Abstract: The Authors present the path for theoretical framework towards leadership adopted due to emerging technologies in organization's environment. Web 2.0 challenge the way organizations are managed in the era of social revolution. If companies are to stay efficient and competitive, leaders must adopt behaviors, new ICT tools and develop new strategies/solutions to appeal to Z/Millennium Generation and incoming Web 3.0 challenges.

Key words: Web 2.0 tools entrepreneurial leadership

Introduction

One of the crucial elements shaping modern organizations is leadership. It has the leverage over the implementation of ICT, resulting in the change of organizational culture leading to the increase of organization and people performance. Entrepreneurial leadership may be based on the assumption, that employees fully dedicated to leader's vision create a strong organization. For a long time leadership has been identified as the key factor in accomplishment of group and individual goals. Garen and Scandura suggest in the leader-member exchange theory, that the quality of relations between leader and member is essential for understanding how leaders influence their subordinates[13]. Another key element in entrepreneurship literature is the ratio of the quality of relationship between leader and subordinate to job satisfaction[11]. Positive relations with leaders are beneficial for subordinates and result in decisions that are made, positive stimulus and career development. This creates positive environment for subordinates and leads to better job satisfaction, and increases organization efficiency[9]. Entrepreneurial leadership should be positively related to employees' satisfaction, their work and how they perceive positive features of organization. It also creates conditions for constructive, challenging work enabling worker appreciation, which subsequently leads to grater job satisfaction[19]. Workers who perceive their work as meaningful and constructive have better job satisfaction than workers who think that their work is of little importance[15]. Workers should find satisfaction in their work if they feel that it has direct influence on the performance of the whole organization[12], like in the case of entrepreneurial leadership. The article attempts to move toward a new framework of the leadership challenges, which may have significant impact or affect Web 2.0 tools. Due to fast technological progress and succeeding social changes many paradigms need rewriting one of them is leadership. With some

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[∗] **Rafał Kozłowski, PhD., Krzysztof Kania, PhD.,** The University of Economics in Katowice

✉ corresponding author: rafal.kozlowski@ue.katowice.pl, krzysztof.kania@ue.katowice.pl

equivalence to a phoenix's renewal, which depends on a preceding phase of decline, we argue that new look at leaders, their roles and abilities to use the web 2.0 tools should be a consequence of a dynamic processes in which leaders must adopt behaviors, new ICT tools and develop new strategies/solutions to appeal to Z/Millennium Generation. The research indicates the importance of Web 2.0 tools as a potential leverage for leaders to increase effectiveness and innovation in organizations. From our perspective, Web 2.0 tools requires complexity in terms of affective and cognitive processes and an integration of this complexity. In designing our study, we used desk research analysis based on critical literature review, content analysis as well as discussion with experts and management staff. The desk research analysis indicated the importance of the topic, which provides the foundations for further empirical research. In the paper we indicate the new directions and inevitable challenges that leader will have to face, then we concentrate on the issue of Web 2.0 implementations, as well as on advantages of Web 2.0 implementation in an organization, finally we draw conclusions. The article is addressed to mangers and even IT specialists , who must support mangers in their work.

Increasing the quality of leadership in Web 2.0/3.0 environment

Difficult market conditions, tougher competition, and growing customer requirements emphasize the problem of the quality of leadership. Information technology development enables prompt changes, mainly by increasing workers participation in problem solving process. It will result in synergy effect of ICT implementation and the leadership in an organization.

Answering the question: what are the requirements for implementing new leadership approach, relevant to the challenges a modern organization has to face?, the authors act on G. Hamel suggestion from his book "Tomorrows Management" that "nature of future relays in social revolution, which is developed in the Internet. The global network possesses the greatest wealth of adaptability, innovation, and attractiveness created by people and accessible for everybody. In many respects the Internet has already become new management technology"[16]. It is assumed that such approach forces also the change of leadership. The project follows the concept of an organization influenced by three key factors mentioned by M. Whitney[30]:

− Web 2.0 technology (portals, wikis, blogs, forums, RSS, etc.),
− the need of increased socialization of company's applications (the number of people connected with the company and using the applications),
− business culture, which allows the maximum use of IT.

In order to achieve tangible benefits of the implementation of these solutions it is required to change: mentality, communication habits, and traditional approach to the role of managers, which should lead towards entrepreneurial leadership as a supportive approach for Web 3.0.

The research on leadership features showed that friendliness, motivation for action, emotional balance, domination, ethical behavior, integrity, creativity, and courage

were related to leadership[1]. In entrepreneurship the features, which distinguish entrepreneurs from other groups, and probably result in establishing new organizations are the need of achievements, locus of control, willingness to take risk, and tolerance of ambiguity[2]. Entrepreneurial management, which is mainly based on contemporary needs for the development of organization and vision-based leadership are opposed to old style administrative management, based on coordination. In comparison to administrative management, entrepreneurial management is more concentrated on an individual and is driven by the growing pace of technological development[27].

On the other hand McGonagill and Doerffer believe that, the era of single-paradigm leadership is now behind us. They think it is more realistic to view the current situation as one of intense fermentation. Leaders seem to be living in a period of continuous disequilibrium, at the boundary between order and chaos, which complexity theory teaches us is the most fertile ground for creativity. It is most probable that the most effective approaches to leadership going forward will meet criteria, such as being: adaptive, supportive of emergence, cognizant of complexity integral, outcome-oriented[23]. Therefore, leaders should unleash creativity, flexibility and speed in order to face seven changes derived from Web 2.0 and Web 3.0 relations (see table 1), which enable everybody - not only ICT specialists, as it used to be - to participate in the creation / design and content analysis of the Internet. Generation Z/Millennium - defined as people for whom the Web is not just a tool or a way to facilitate the solving of various problems, but a part of life – enters the labor market. They are permanently connected to the Web, and at least some of their interests, passions, knowledge and work are based on it. In this context, leaders must change their attitude as they get new tools but also face completely new challenges. However, the seven changes should help leaders to meet the needs of new employees[23]:

1. Leadership is now viewed as an activity rather than a role.
2. Leadership is now considered a collective phenomenon.
3. Individual leaders now need higher levels of personal development.
4. There has been a movement away from organization-centric and toward network-centric leadership.
5. There has been a shift from viewing organizations as "organisms" rather than "machines".
6. "Learning and adapting" has been replacing "planning and controlling".
7. There has been a transition from Generation X to Generation Z/ Millennium.

Table 1. Changes derived from Web 2.0 and Web 3.0 relations

The changes	Examples of Web 2.0 relations	Web 3.0 relations	
1.	Running / initializing blogs, initiating new events and threads in social media, indicating problems, following, correcting, counteracting, etc.	**Semantic:** Filtering, analysis, semantic search pattern recognizing, automated data etc.,	working in the context
2.	all Web 2.0 tools except RSS and other personalized tools		
3.	e-learning, forums, self education, RSS, news,	**Mobility:** Anytime, anywhere, fast, reactivity, time reduction, being on-line, multi-screening, multicasting,	hyper - connectivity
4.	social media, social network analyzing, social network monitoring		
5.	social media, social software,		
6.	Folksonomies		
7.	Being presented in cyberspace, social support		

Source: based on own research

Implementation of Web 2.0 tools

We propose the necessary condition for wider implementation of Web 2.0 tools in an organization is the examination of how they are actually used in creating leadership in an organization. Research on the relationship between Web 2.0 tools and entrepreneurial leadership, and organization efficiency are in preliminary stage. It is indicated in literature, that due to the application of Web 2.0 tools it is possible to develop a new approach towards leadership and accomplishing goals. However, there is no empirical research confirming this. The current use of Web 2.0 tools in creating entrepreneurial leadership has not been defined yet – as far as the authors know, there have not been published any statistical data in this field.

The widely described by scholars importance of leadership and lack of practical knowledge of the Internet and Web 2.0 environment were the immediate stimuli for this research. Literature is dominated by traditional approach to leadership. However, there is no overall, integrated operationalization of entrepreneurial leadership, Web 2.0 tools analysis and their influence on decision-making process in enhancing organization efficiency. Therefore, it is important to complement the knowledge in this field. Moreover, using the existing measures might be inadequate for entrepreneurship measured in the Web 2.0 environment, which might result in inappropriate descriptive and normative theory building. Several elements of this research have been explored empirically in small extend, but there are no complex research combining Web 2.0 tools with entrepreneurial leadership in the context of efficiency improvement. The planned researched in this field would be a synthesis of previous theoretical and empirical concepts into one complex model. Management concepts and ICT become more and more intertwined. Many new technologies, and new ICT solutions changed approach

towards management, and vice versa – the technology development allowed theory implementation. The arrival of new technologies, known as Web 2.0, and their application in an organization initiated such significant changes that the organizations that use Web 2.0 tools are now called Organization 2.0. These organizations implement the newest ICT tools and implement the idea of involving a large number of workers in management process and improvement of organization efficiency.

In Organization 2.0 wisdom of crowd is used for problem solving and improving internal and external communication. The influence of the Internet and Web 2.0 tool has been so strong on so many business areas, that '2.0' and 'e-' are added to more and more notions to indicate their unique character. However, the technology itself will not ensure the success of a company. And if used inappropriately technology may even have harmful effects on the company. In that case new communication channels will become time-consuming and useless gossip channels. Only focusing people's attention on particular problems will result in synergy and wisdom of crowd. Organization 2.0 means specific strategy, culture, management approach, ICT support. They are all interrelated and mutually dependent. Traditional communication media, like snail mail or telephone, have much smaller bandwidth than the Internet. Sending messages to a large number of people all over the world simultaneously at no extra costs provides new solutions for problem solving process. It provides access to the knowledge, experience, and wisdom of enormous number of people, which might be used for problem solving.

Hamel and Breen in their book notice analogy between management 2.0 and the Internet. Other authors, describing the concept of employee participation[28], also indicate the strength of this relationship. According to C. Hamel the Internet's ability to implement innovation and its mass appeal result from the fact that[16]:

− everyone has the right to say what they want,
− creative tools are common,
− it makes experiments easy and cheap,
− it much prefers abilities to references and papers,
− participation is voluntary,
− the power comes from the bottom,
− there is authority flow and it depends on value added,
− there are only natural hierarchies,
− societies are independent,
− individuals have profound knowledge
− almost everything is decentralized,
− there is fair competition of ideas,
− buyers and sellers have free access,
− resources can follow opportunities,
− decisions are made collectively.

The changes in business environment and the challenges managers face – like competition in innovations, leading in multicultural environment, development of

learning organization, globalization, emergent new economic forces, to mention just a few, make both practitioners and scholars admit that entrepreneurial leadership is the answer. Therefore, the direction of this research is promising, however, the development of this research area is restricted by the lack of the tool to measure the characteristics and behavior of entrepreneurial leaders. Some researchers adopted entrepreneurial orientation scale to measure entrepreneurial features[4]. However, entrepreneurial orientation is a construct of organizational level[6] and its three components (innovation, proactivity, and risk-taking) characterize entrepreneurial organizations, and not necessarily entrepreneurial leaders. The combination of entrepreneurship and leadership may provide leaders and managers with new recipes for organization's success. It also equips researchers with necessary tool for the assessment of entrepreneurial leadership. Leadership may be voluntarily delegated by the group[9], and it may be consolidated in hands of one person, or dispersed[12], i.e. distributed among the members of the group. Web 2.0 technology means Internet-based tools and services. The more users the greater the value of the tools is. Socialization of business applications means that the data-based model is changed into the application-based model, where people are the most important. Such solutions enable easier knowledge collection and distribution. The most important is not the knowledge itself but the way it is exploited by people. Web 2.0 technologies allow suitable data processing, navigation, interpretation and segregation, and provide people with data, allow them interaction and support data interpretation. Web 2.0 technologies may be used by managers for more efficient decision-making process.

Advantages of Web 2.0 tools for organization

New business culture is probably the key element influencing modern organizations. Social applications are founded on people who use them. In order to implement Organization 2.0 successfully it is essential to change mentality, communication habits and understanding of the role of manager as a leader. Social applications have been successfully applied in many organizations in different business sectors, for example in: Bank of America, Wells Fargo, FedEx, Morgan Stanley, etc.

The reasons for implementing these solutions, according to Forrester Research, are:
− increased productivity – 74%
− tough competition – 64%
− solving specific problem – 53%
− partner's recommendation – 53%
− staff initiative – 45%
− included in service – 25%

In 2007 BEA Systems carried out research, which shows that lack of Web 2.0 investments in many European companies is due to the fact that "managers do not understand advantages of using Web 2.0 for business"[10]. The benefits of transforming a company into Organization 2.0 can be seen in the following areas:

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− internal communication,
− B2B communication,
− B2C communication,
− IT development in an organization.

Better internal communication results from:
− access to experts,
− immediate contact search,
− clear organizational structure.

Web 2.0 tools allow for better use of workforce potential, as people are more involved and have better contacts and relations with colleagues. That leads to more innovations and better productivity, although it may require changes in the staff approach. According to R. Mill external communication may by enhanced because[24]:

− it is easily accessible through different channels, and business partners may choose the most appropriate for them,
− it guarantees contact with a real person instead of artificial, nice announcements, and therefore, facilitates access to key people on the market and spreads knowledge about the company,
− it facilitates brainstorming for the best solutions instead of following standard procedures.

Moreover, solutions offered by Web 2.0 tools:
− facilitate contact with organization's environment, by using (via interface) convenient social tools (for example, conversation style, visible feedback), which leads to better service, and therefore better efficiency,
− foster creation of modern image,
− facilitate building trust and social relations,
− build better relations with stakeholders by exchanging experiences.

Research conducted by Melcrum Social Media Survey in 2010 indicates the following business benefits of applying social applications[19]:
− innovation and possibility to exchange ideas – 41% of respondents,
− knowledge management and development of cooperation – 38% of respondents,
− increase of workers' aspirations and involvement – 38% of respondents.

It may be noted that these areas are common to the activities of an entrepreneurial leader. Entrepreneurship concentrates not only on entrepreneur but also on combining entrepreneurial person with entrepreneurial opportunities[25]. Vast majority or research on entrepreneurship and leadership derives from one of these two research fields. It means that researchers in their studies were concentrated either on leaders, who showed entrepreneurial behaviors and attitude[14] or on proprietors of new enterprises, who became leaders to make their companies successful. In the latter case, D'Intino, Goldsby, Houghton and Neck claim that lessons on self-leadership may "provide entrepreneurs with processes to lead themselves during the period of challenges, while creating and developing a

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business"[8]. Jensen and Luthans in their research focus on young, smaller enterprises, and find positive relationship between how workers perceive authentic leadership and their attitude towards work and happiness[20]. This is what Gibb suggests in relation to leaders in general[12]. Leadership behavior (inspiring and leading) in young and rapidly growing companies is related to the results[18]. However, changing of mind-set, long-lasting habits, and in particular the transfer of power might be a major obstacle to implementing new solutions.

Therefore, it may take time for modern companies to implement Web 2.0 tools efficiently. They will have to overcome many difficulties, but the companies, which face the challenge, will definitely benefit considerably. Majority of leaders associate Web 2.0 tools with communication, but not necessarily with stimulation of employee engagement, their creativity and problem-solving environment. Therefore, Web 2.0 tools are used only at the lowest utility level. This is due to the lack of the appropriate leader, who using the Web 2.0 tools would transform Network into the site of cooperation, opportunities and solutions.

From ICT perspective introduction of Web 2.0 tools is relatively easy. There is no need for any trainings, its use is intuitive and commonly known for any computer user. But to make them useful they must be used appropriately. Managers who want to implement Web 2.0 tools face new challenges. The tools, if used inappropriately, may cause dissatisfaction and trouble, and instead of becoming a forum for exchanging experiences, ideas, and knowledge they may become just a gossip site. Therefore the role of entrepreneurial leader 3.0 is mainly to encourage people to active participation, incorporate the knowledge, and reward the most active participants. In other word there must be a feedback between social applications and business.

Summary

New ICT technologies provide a simpler way to manage knowledge and offer new content format, including graphic and multimedia, which help and are able to incentive knowledge diffusion. Also communication styles and problem solving are evolving in a more collaborative approach, especially for the so-called generation Z and millennial people. New approach to leadership may be important to complex functioning because differences in how decisions are made within the organization could affect the co-evolution of human and social capital. Leadership occurs within the interdependent interactions of emergent collective action and helps produce emergent outcomes such as learning and adaptation. Summarizing leadership is important to the complex functioning of the network. Enabling leadership has two roles. First, it creates conditions that stimulate emergent collective action and adaptive leadership. Second, it channels productive emergent outcomes originating in the collective action response back up to managerial leadership for strategic planning and exploitation.

How introducing Web 2.0 tools change leader's possibilities and tasks depending on her/his leadership approach in the growing interaction complexity and how

leadership role changes usability and scope of use of Web 2.0 tools and what is the influence of leadership styles on the usability and scope of use of Web 2.0 tools. These and other questions we leave for future research[21].

To sum, the Web 2.0/3.0 solutions in the context of organizational efficiency and the change of leadership should facilitate communication, and exchange of ideas or beliefs. The Internet services cannot be regarded as Web 2.0 if they do not have social elements. Web 2.0 services should provide the user with new value and should break the habits. The users should play an important role in anticipating new opportunities for an organization. It stimulates creativity at relatively low costs of the maintenance of Web 2.0 tools. The users determine the final form of the Web 2.0 tools, by reading and placing there only the key elements for the organization and its environment. Web 2.0 environment may be created relatively fast but its death-rate is relatively high, especially if it is not approved by potential users and not managed efficiently by leaders. Future research should concentrate on conceptualization and measurement of positive and negative relations between leadership styles and Web 2.0 /Web. 3.0 tools.

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WYZWANIA DLA PRZYWÓDZTWA W KONTEKŚCIE ROZWIĄZAŃ WEB 2.0

Streszczenie: Autorzy przedstawiają teoretyczny zarys wobec przywództwa przyjęte ze względu na nowe technologie implementowane w środowisko organizacji. Narzędzia Web 2.0 kwestionują i ujawniają nowe postrzeganie procesów społecznych oraz stawiając nowe wyzwania dla zarządzania w dobie rewolucji społecznej. Jeśli firmy chcą być bardziej efektywne zwiększyć swoją przewagę konkurencyjną, liderzy muszą przyjąć nowe zachowania, narzędzia informatyczne i być zdolni do opracowania nowych strategii / rozwiązań w interakcji społecznej szczególnie odwołując się do pokolenia Z / Millennium Generation i wyzwania nadchodzącej ery Web 3.0.
Słowa kluczowe: narzędzia WEB 2.0, przedsiębiorcze przywództwo

的 **Web 2.0** 解決方案環境中嚴峻的挑戰

摘要：作者提出對領導理論框架是由於組織環境的新興技術所採用的路徑。 Web 2.0 的挑戰組織在社會革命的時代，管理方式。如果公司要保持效率和競爭力，領導者必須採取的行為，新的 ICT 工具和制定新的戰略/解決方案，以吸引到 Z/千禧一代和傳入的 Web3.0 挑戰。
關鍵詞：Web 2.0 工具企業領導。