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Effective Knowledge Sharing in Multi-Generation Organization

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The paper presents the results of literature reviews, a primary data analysis and case studies examining Polish firms from various sectors including agricultural, construction and banking regarding effective knowledge distribution within the organization. Current demographic changes influence the labor market which is diverse in terms of age. It results in the situation when up to five generations of employees are working for the same company. The aim of the research study was to identify the most effective knowledge distribution channel in multigenerational organizations and determine communication methods that best suit each of employees' generations. The authors developed the matrix that presents preferable communication channels in relation to the cultural conditions in Poland. We have found the concentration of communication forms preferred by each of the generations and the importance of the selection of the appropriate methods that let integrate multigenerational teams of employees.

Key words: multigenerational organization, knowledge sharing, effectiveness, knowledge distribution tools, demographic structure of the organization, demographic change

JEL classification: J28, M54

1. Introduction

In the last decades we have been able to observe dynamic changes in enterprise environment: new technologies have new applications, new competitors build their competitive advantage in the rapidly changing new strategic fields, the product lifecycle is significantly reduced. In this situation the only organizations which will remain on the market will be those which have the ability to acquire new knowledge and to transfer it effectively within their structures in order to enhance their competitiveness. The multi-generation system on a large scale is a new challenge for enterprises. These employees have diverse value systems, they absorb technical innovations in different ways and prefer different knowledge transfer channels. For these reasons, knowledge management in contemporary organizations is a big managerial challenge. The paper presents key issues in the area of knowledge distribution within an organization. The authors describe in detail the characteristics of multi-generation systems of employees in enterprises as well as the use of knowledge distribution channels and communication methods. Special attention is given to the methods of exchanging information, which were analyzed on the example of three sectors: constructing, banking and agricultural. The authors try to determine the most effective ways of exchanging information and identify those which are best suited for each age group.

2. Backgrounds

2.1. Knowledge management in the organization and importance of information

Knowledge is one of the leading elements allowing to build a sustainable competitive advantage of companies (Kowalczyk and Nogalski, 2007). It has become the biggest goodwill, which we must manage effectively: explore, manipulate, store, share and use (Davenport, De Long and Beers, 1997). In economic terms, it is the ability to use, process and analyze obtained data and information so as to be able to solve a specific problem, take an action or decision (Brdulak, 2005). In organizational terms, knowledge is understood as a set of procedures and technical measures ensuring: the transfer of the staff's personal

experience and knowledge to the database of the organizations and the acquisition, storage and distribution of the necessary information among eligible employees (Trajder, Paszek and Iwan, 2012). Peter Drucker defines knowledge as an effective use of information in action (Drucker, 1994). The above definitions emphasize the role of information in the definition of knowledge. Information placed in the proper context enables efficient and successful action of an individual or organization. Knowledge is not a homogeneous concept. In enterprises there are two basic types of knowledge: tacit knowledge and explicit knowledge. Tacit knowledge is the knowledge (the existence of which) we are aware of and which we use in everyday life, but we are not quite able to explain its essence, which makes its formalization and transferring to others very difficult (Brdulak, 2005; Nowshade, 2013). Explicit knowledge is generally accessible, easily visualized through verbal communication, documentation, diagrams, etc., and it can be easily transferred, registered, propagated and stored. Management of such knowledge is much easier because it can be described by means of procedures and guidelines (Smith, 2001).

Knowledge management is a new scientific field. It has existed for only over 20 years. In the literature there are many different definitions of knowledge management. E&Y (2013), one of the leading consulting companies in the world, defines knowledge management as a system created to help enterprises acquire, analyze and use knowledge in order to make faster, smarter and better decisions, which will increase their competitive advantage (Ezingeard, Leigh, Chander and Wilde, 2013). Knowledge management is the whole of activities used for effective functioning of a company in order to obtain their goals. It's a complex process which depends on the company's specificity, its environment, the access to the information within the range of its activity (Trajder, Paszek and Iwan, 2012). Appropriate knowledge management contributes to the process of increasing the company's innovation, effective ideas management and improvement of other processes. Enterprises take numerous measures to stimulate the process of sharing information obtained by particular members of the organization. Therefore, it is important for companies to manage knowledge in a comprehensive and systematic way (Brdulak, 2005).

The aim of knowledge management is appropriate use and provision of the stuff's open and hidden knowledge which, in effect, leads to an increase in the value of decisions under circumstances of incomplete and uncertain information – an increase of competitive advantage. This goal can be achieved with the use of information technology (Trajder, Paszek and Iwan, 2012).

2.2. The knowledge hierarchy – the role of information

The literature presents many concepts (Brdulak, 2005; Tobin, 1997; Beckman, 1997; Applehans, Globe and Leugero, 1999) of the illustration of the knowledge hierarchy, which are part of the knowledge management system in a company. The first element of the knowledge management system is data (facts, images, number sets, without a wider context). If one links, correlates and gives a specific purpose to these data, they get information. Information is filtered and totaled data which can be categorized, classified, changed into formulas, logical sequences, etc. In order to receive knowledge one must add operation and use to the information, give it a particular structure, interpret and put it in a particular context. Knowledge is the use of the information in practice. The factors which form it are intuition and experience, but also skills and abilities of the organization. Knowledge is the information having a personal, subjective reference, integrated with previous experiences.

2.3. Changes in the demographic structure of the labor market and the challenges of employers

Demographic changes currently observed create working places for many generations. In previous decades, the generation gap and multicultural diversity were not observed with such intensity. The problem occurs in the range of differences between employees and it forces the organization to redefine its organizational structure and methods of shearing knowledge.

Currently the organizations in the Polish market which are to meet the challenges such as rapidly changing market must be prepared to manage extreme profiles of employees. One of the key challenges is to manage the company of five generations, from the experienced workers who are 70 to 20-year-old employees who have just completed their education. The situation resembles multigenerational family in a one-room apartment. The characteristics of the modern workforce generational differences are as follows (Tryfon-Bojarska, 2014):

- older than 35-year-old employees:

1. 70-year-old employees- experienced, top level managers, engaged in realizing tasks, used for the traditional model of hierarchy in the organizational structure

2. The generation of baby boomers (the generation born in the 70s of the twentieth century) - characterized as highly engaged in realizing tasks and used for traditional hierarchical model of the organization. Due to financial reasons, the desire to remain active and a sense of professional fulfillment, many of them decide to extend its presence in the labor market, as experts in their fields.

3. Generation X (contemporary forty-year-olds) - well understanding the principles of modern capitalism, perfectly fitted to work in organizations with diverse culture and age section. They appreciate individualism and flexibility. They expect that training and support of their development will be easily accessible.

- Generation Y (born after 1980) - They are young, ambitious, well-educated, they know foreign languages and they grew up in a market economy. They can be characterized as self-confident and open to new challenges individualists. They do not hesitate to change their job from day to day. They are very flexible in terms of teamwork and well prepared for the use of new technologies and mobile applications. They consider the Internet and social networking sites as the main source for obtaining information. They want to be creative and economically active. They are willing to undertake joint social initiatives. They expect to accelerate the development of their careers. Most of them declare that they would like to work on the principles of B2B.
- Generation Z (born in the second half of the 90s of the twentieth century) – They are young people who are entering the labor market. These people grew up among modern technologies, increasing standards of living and consumption, a big mobility factor and fast pace of life. They are more flexible and more mobile than generation Y. They are ready to change their jobs frequently and they prefer project work. An employment contract is not important for them. They are less focused on themselves than Generation Y because in childhood they encountered many global problems such as terrorism, financial crisis, environmental problems and migration of parents connected with searching for employment. They believe more in ideals and they are more uncompromising when it comes to compliance with social values. According to labor market analysts, in the future probably 65% of them will work in jobs which do not yet exist. From an early age they train the skills needed in today's business (quick decision making, adaptability to the new environment, the use of mobile tools, applications and strategy games). They regard social networks as an effective everyday method of searching for information. Stable employment is of no value for them. They are mainly looking for employers with an untypical, creative approach to the activities and operations of the company.

Due to the multi-generation factor, today's organizations will face many challenges in the area of knowledge management in such extremely diverse groups of employees. The big challenge for the enterprises will be identifying the most effective knowledge distribution channels which will reach all five generations of employees at the same time in the way that is accessible considering their preferences. By 2025 the generations XYZ will constitute 75% of the total work force in the world. The study shows that 45% of today's population of Poland is the generation XY(Tryfon-Bojarska, 2014).

3. Research methodology

The primary objective of this study was to analyze the knowledge distribution channels in multi-generational organizations in order to identify whether there are communication methods that better suit the youngest generation of employees between 20 and 35 years old (called Generation Y) than older employees (older than 35 years old). It was hypothesized that the knowledge distribution channels based on new technologies such as e-learning, blogs and podcasts would be assessed as significantly more effective by the Generation Y than by older employees. Moreover, the researchers assumed that the mean employees' assessment of the knowledge distribution channels do not differ between Generation Y and older employees in terms of the traditional forms of knowledge distribution such as regular training/workshops led by instructors, various forms of publications or trade fairs.

The research objectives included:

- the assessment of the effectiveness of the knowledge distribution with regard to the distribution channels valuable for employees related to the two age groups;

- the analysis of the variability of the effectiveness of the knowledge distribution channels.

The researchers analyzed the data concerning the effectiveness of the knowledge distribution in multi-generational organizations in Poland, collected by the researchers between February and March 2015. The researchers collected data concerning the effectiveness of the knowledge distribution from employees representing organizations from construction sector, banking sector and agricultural sector. The empirical data was collected with the use of a paper questionnaire filled in by the respondents. The employees were asked questions regarding their assessment of the effectiveness of the various knowledge distribution channels. The channels not only directly controlled by the organizations but also available for the employees from external sources such as academic or sector publications, external regulations, conferences or trade fairs. Numerical evaluation of all attributes is made with ratings ranging from 1 to 5. The analysis presented in this study includes employees' evaluation of the effectiveness of the knowledge distribution with regard to two groups of employees: Generation Y and older employees.

4. Sample characteristics

The analyzed group of employees are working in one organization representing the construction sector, one organization representing the finance sector and a group of organizations representing agricultural sector.

The survey sample is by type a 'convenience' sample and its size is 159 employees out of which 75 were within the age bracket of 20-35, and 84 were more than 35 years old. According to the survey results presented in Table 1, 31,4% of the respondents who answered the question completed their education on the level from primary to bachelor and 68.1% had a Master's degree. 42.5% of the respondents were from construction sector, 33.1% were from banking sector and 23,1% from agricultural sector. 64.3% of the respondents worked as specialists and 35.5% worked as managers.

Characteristic			**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Education	Valid	Primary to Bachelor	50	31.3	31.4	31.4
		Master of Science	109	68.1	68.6	100.0
		Total	159	99.4	100.0	
	Missing	System	1	.6		
	Total		160	100.0		
Sector	Valid	Construction	68	42.5	43.0	43.0
		Banking	53	33.1	33.5	76.6
		Agricultural	37	23.1	23.4	100.0
		Total	158	98.8	100.0	
	Missing	System	2	1.3		
	Total		160	100.0		
Position	Valid	Specialist	101	63.1	64.3	64.3
		Manager	56	35.0	35.7	100.0
		Total	157	98.1	100.0	
	Missing	System	3	1.9		
	Total		160	100.0		

Table 1. The sample characteristics

The analysis of the data in this study consisted of the quantitative analysis.

- The analysis of the knowledge distribution channels concerned the measurement of their effectiveness for employees
- The t-Test (Harmon, 2013) was used to determine whether there are any statistically significant differences between the respondents' perceptions of the effectiveness of the knowledge distribution channels with regard to Generation Y and older employees.

The researchers decided to analyze nineteen knowledge distribution channels used by the respondents from multi-generation organizations to enhance their professional knowledge. Those included: a training at the workplace (led by an internal trainer), a training/workshop (led by an internal trainer), an intranet e-learning training, a training/workshop in the office space (led by an external trainer), a training/workshop outside the office (led by an external trainer), a training/workshop outside the office (led

by an external trainer), an internet e-learning training financed by your company, internal documentation, an internal report, an academic publication, a sector publication, a specialist report, an external regulation, a formal company event, a lecture/workshop at trade conference, a trade fair, a sector blog, a video blog, a podcast, an online training not financed by the company.

5. Findings

The analysis of the data in this study comprises the quantitative analysis. The research provides the aggregated results from one organization representing the construction sector, one organization representing the finance sector and a group of 19 organizations representing the agricultural sector. Therefore, the research results reflect employees' perception of the effectiveness of various knowledge distribution channels across several sectors in Poland chosen by the researchers .

The quantitative analysis of employees perception of the effectiveness of the knowledge distribution channels

The quantitative analysis of the distribution channels was carried out on the basis of the employees' evaluation of the effectiveness of the knowledge distribution by applying a scale ranging from 1 to 5. The analysis of the respondents' perception of the main knowledge distribution channels was carried out with a division into two age groups: Generation Y and older employees. The results of the quantitative analysis of the respondents' perception of the effectiveness of the knowledge distribution channels are presented in Table 2.

	Generation Y (between 20 and 35 y.o.)		**Generation X and older (36 y.o. and more)**		**All**	
	Mean	**Std. Deviation**	**Mean**	**Std. Deviation**	**Mean**	**Std. Deviation**
A training at the workplace (led by an internal trainer)	4.01	.849	4.02	.969	4.01	.903
A training/workshop (led by an internal trainer)	4.04	.695	4.04	.736	4.04	.711
An intranet e-learning training	2.21	1.013	2.75	.975	2.48	1.026
A training/workshop in the office space (led by an external trainer)	3.68	.999	3.89	.956	3.78	.980
A training/workshop outside the office (led by an external trainer)	4.00	.877	4.13	.801	4.07	.833
An internet e-learning training financed by your company	2.53	1.186	2.77	1.053	2.65	1.124
Internal documentation	3.23	.965	3.37	.790	3.31	.888
An internal report	3.25	1.035	3.33	.880	3.31	.964
An academic publication	3.63	.900	3.26	.958	3.44	.943
A sector publication	3.84	.784	3.80	.939	3.82	.865
A specialist report	3.45	1.063	3.60	.996	3.53	1.025
An external regulation	2.95	1.110	3.16	1.073	3.08	1.100
A formal company event	4.00	.962	3.91	.917	3.95	.932
A lecture/workshop at trade conference	4.12	.808	3.74	.866	3.90	.856
A trade fair	3.80	.957	3.30	1.192	3.51	1.123
A sector blog	3.44	1.134	3.16	1.040	3.30	1.088
A video blog	3.67	1.046	2.88	1.003	3.28	1.088
A podcast	3.42	.986	2.95	.951	3.17	.991
An online training not financed by the company	2.98	1.131	2.67	.966	2.82	1.047

Table 2. Respondents' perception of the effectiveness of the knowledge distribution channels

According to the survey results, the highest rated knowledge distribution channels in terms of

effectiveness included: a training/workshop outside the office (led by an external trainer), a training/workshop (led by an internal trainer), a training at the workplace (led by an internal trainer), a formal company event and a lecture/workshop at trade conference. Other knowledge distribution channels, such as: a sector publication, a training/workshop in the office space (led by an external trainer), a specialist report, a trade fair, and an academic publication received higher rate. Internal documentation, an internal report, a sector blog, a video blog and a podcast received lower rates. The lowest rated knowledge distribution channels in terms of effectiveness included: an external regulation, an online training not financed by the company, internet e-learning, a training financed by your company and an intranet e-learning training.

In order to determine whether the respondents' perceptions of the effectiveness of the knowledge distribution channels differ between Generation Y and older employees, the t-test was preceded by the Kolmogorov-Smirnov test (Johann, Anastassova, 2014) in order to determine the normality of distribution of responses. In case of all knowledge distribution channels the test revealed the normal distribution.

According to the results of the analysis presented in Table 3, there are statistically significant differences in the average respondents' assessments of the knowledge distribution channels between both age groups with regards to a training led by an internal trainer at the workplace, a training/workshop led by an internal trainer, a training/workshop led by an internal or external trainer in both the office space and outside the office, an internet e-learning training financed or not financed by the company, internal documentation, an internal reports, a sector publication, a specialist report, an external regulation, a formal company event and a sector blog. In all those cases the significance level was above 0.05. However, a statistically significant difference can be observed in the mean employees' assessments of both age groups with regards to other knowledge distribution channels, including: a video blog, an intranet e-learning training, an academic publication, a lecture/workshop at trade conference, a trade fair and a podcast. The significance value in those cases was lower than 0.05.

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
A training at the workplace (led by an internal trainer)	Equal variances assumed	.292	.590	-.004	133	.997	-.001
	Equal variances not assumed			-.004	129.016	.997	-.001
A training/ workshop (led by an internal trainer)	Equal variances assumed	.108	.743	.000	136	1.000	.000
	Equal variances not assumed			.000	135.554	1.000	.000
An intranet e-learning training	Equal variances assumed	.208	.649	-2.899	114	.004	-.535
	Equal variances not assumed			-2.897	113.402	.005	-.535
A training/ workshop in the office space (led by an external trainer)	Equal variances assumed	.339	.561	-1.257	136	.211	-.209
	Equal variances not assumed			-1.256	135.278	.211	-.209
A training/ workshop outside the office (led by an external trainer)	Equal variances assumed	.079	.779	-.925	141	.356	-.130
	Equal variances not assumed			-.919	132.979	.360	-.130
An internet e-learning training financed by your company	Equal variances assumed	1.030	.312	-1.149	115	.253	-.239
	Equal variances not assumed			-1.152	114.485	.252	-.239
A internal documentation	Equal variances assumed	1.492	.224	-.897	131	.371	-.137
	Equal variances not assumed			-.893	123.775	.374	-.137
An internal report	Equal variances assumed	1.315	.254	-.482	121	.631	-.083
	Equal variances not assumed			-.480	115.897	.632	-.083
An academic publication	Equal variances assumed	.001	.971	2.285	132	.024	.368
	Equal variances not assumed			2.292	131.903	.024	.368
A sector publication	Equal variances assumed	2.654	.105	.283	145	.778	.041
	Equal variances not assumed			.287	144.881	.775	.041

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
A specialist report	Equal variances assumed	.166	.684	-.890	138	.375	-.155
	Equal variances not assumed			-.888	134.934	.376	-.155
An external regulation	Equal variances assumed	.009	.924	-1.124	137	.263	-.208
	Equal variances not assumed			-1.121	133.392	.264	-.208
A formal company event	Equal variances assumed	.031	.860	.566	146	.572	.088
	Equal variances not assumed			.563	139.741	.574	.088
A lecture/ workshop at trade conference	Equal variances assumed	1.595	.209	2.456	123	.015	.376
	Equal variances not assumed			2.485	114.390	.014	.376
A trade fair	Equal variances assumed	2.143	.146	2.390	116	.018	.492
	Equal variances not assumed			2.480	114.189	.015	.492
A sector blog	Equal variances assumed	2.361	.127	1.419	115	.159	.286
	Equal variances not assumed			1.420	114.451	.158	.286
A video blog	Equal variances assumed	.592	.443	3.926	104	.001	.782
	Equal variances not assumed			3.929	103.998	.001	.782
A podcast	Equal variances assumed	.629	.429	2.466	101	.015	.471
	Equal variances not assumed			2.460	98.056	.016	.471
An online training not financed by the company	Equal variances assumed	.037	.847	1.397	91	.166	.304
	Equal variances not assumed			1.385	85.084	.170	.304

Table 3. Independent-Samples test

An academic publication, a lecture/workshop at trade conference, a trade fair and a podcast were evaluated higher by Generation Y while an intranet e-learning training was evaluated higher by Generation X and older generations. Given the differences between the mean assessment of the two groups of generations, it can be concluded that such knowledge distribution channels as an online training not financed by the company, a sector blog and an internet e-learning training financed by the company should be carefully examined and used especially when Generation Y, who scored these knowledge distribution channels higher, is concerned.

6. Conclusion

The research which was conducted by the authors of the article pointed that despite the generation gap and work culture preferences of each generation, the most and the least efficient channels of communication are similar for both groups, what is presented in Table 4.

	Generation Y (between 20 and 35 y.o.)	Generation X and older (36 y.o. and more)
The most efficient channels	1. A lecture/workshop at trade conference **2. A training/workshop (led by an internal trainer)** **3. A training at the workplace (led by an internal trainer)** **4. A training/workshop outside the office (led by an external trainer)** 5. **A formal company events**	**1. A training/workshop outside the office (led by an external trainer)** **2. A training/workshop (led by an internal trainer)** **3. A training at the workplace (led by an internal trainer)** **4. A formal company event** 5. A training/workshop in the office space (led by an external trainer)
The least efficient channels	**1. An online trainings not financed by the company** 2. An external regulation **3. An internet e-learning training financed by the company** 4. **An intranet e-learning training**	1. A video blog **2. An internet e-learning training financed by your company** 3. **An intranet e-learning training** **4. An online training not financed by the company**

Table 4. Knowledge distribution channels preferential matrix

The most effective channels of communication for the representatives of Generation Y (between 20 and 35 y.o.) and Generation X and older (36 y.o. and more) are: a training/workshop (led by an internal trainer, a training at the workplace (led by an internal trainer), a training/workshop outside the office (led

by an external trainer) and a formal company event.

The least effective channels of communication for the representatives of Generation Y (between 20 and 35 y.o.) and Generation X and older (36 y.o. and more) stated: an online training not financed by the company, an internet e-learning training financed by the company and an intranet e-learning training.

The opinion of the authors, the results of the research are interesting especially if we consider that the companies choose e-learning as an inexpensive and effective method. The results of this research will be the base for our further research on the original and direct causes of the information and knowledge distribution channels preferences.

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