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Employee Multigenerality in the Aspect of the Use of ICT

Multigeneracyjność pracownicza w aspekcie wykorzystania technologii ICT

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Abstract: The aim of the article is to analyse the degree of use of ICT solutions by employees of Silesian companies from different generations. Research was conducted among 300 people from different generations and employed in Silesian enterprises. The conducted research has shown that representatives of the Baby Boomers generation have some difficulties in using ICT devices, and that their digital competences remain the lowest in relation to the younger generations. Yet, a small percentage of people from the oldest generation take part in training to increase their digital competences, and it would be a good practice to organise such training. It is very positive that the digital competences of the Y, X and Z generation employees are at a satisfactory level. The transfer of knowledge between generations could be a good solution members of younger generations could support older employees in the use of ICT.

Keywords: ICT, multigenerationality, Internet, enterprise, digital competences.

Streszczenie: Celem artykułu jest analiza stopnia wykorzystania rozwiązań ICT przez zróżnicowanych wiekowo pracowników śląskich firm. Przeprowadzono badania wśród należących do różnych pokoleń 300 osób zatrudnionych w śląskich przedsiębiorstwach. Pokazały one, że przedstawiciele pokolenia *Baby Boomers* mają pewne trudności w posługiwaniu się urządzeniami ICT, a ich kompetencje cyfrowe są niższe niż młodszych pokoleń. Wciąż niewielki odsetek osób z pokolenia najstarszego bierze udział w szkoleniach podwyższających ich kompetencje cyfrowe, a z pewnością ich zorganizowanie byłoby korzystne. Optymistyczne jest to, iż kompetencje cyfrowe pracowników pokoleń Y, X i Z kształtują się na zadowalającym poziomie. Dobrą praktyką mogłby być transfer wiedzy pomiędzy pokoleniami. Przedstawiciele młodszych pokoleń mogliby wspierać starszych pracowników w zakresie wykorzystania technologii ICT.

Słowa kluczowe: technologie ICT, multigeneracyjność, Internet, przedsiębiorstwo, kompetencje cyfrowe.

1. Introduction

In the modern labour market, members of several generations meet, differing from each other in the degree of use of ICT solutions and the level of digital competences. This is why it is so important to constantly improve the qualifications of employed staff.

The aim of the article was to analyse the degree of use of ICT solutions by employees of Silesian companies from different generations. It was hypothesized that members of the oldest generation have the lowest digital competences in relation to younger employees, which may be related to too little training in this area. This hypothesis was verified on the basis of conducting surveys on a group of 300 people belonging to different generations and employed in Silesian enterprises.

2. Multigenerationality in the labour market

In recent decades, multigenerationality, understood as multigenerational employees, has become a very common phenomenon. In the modern labour market four generations can meet simultaneously. Due to the generational span, they differ significantly in their lifestyles, motivations, methods of communication, needs, but also the ability to use digital technologies (Kaczmarek, Krajnik, Morawska-Witkowska, Remisko, Wolsa, 2009, p. 23).

The following are distinguished: Baby Boomers, those born in the period 1946-1964, generation X born in 1965-1976, generation Y (1977-1990) and Z (born after 1995) (Żarczyńska-Dobiesz and Chomałowska, 2014, p. 407). Each of them is characterised by a unique combination of competences, knowledge, skills and talents, etc. (Chomałowska and Smolbik-Jęczmień, 2013, pp. 193-202).

People from the Baby Boomers generation have a strongly inbuilt sense of authority and position, characterised by a desire to gain power. Most often they perceive the world patriarchally, and define reality through a vertical structure which motivates them to climb the career ladder from scratch. They build the perception of their own value through self-esteem. People of this generation clearly distinguish between the female and male roles (Pyka, 2009, pp. 103-114). The role of a woman is perceived mainly through the prism of being wife and mother, whereas a man is a guarantor of financial security and stability. Members of this generation attach importance to such values as respect for authority, solidarity and hierarchical loyalty (Reisenwitz and Iyer, 2009, pp. 91-103).

In Poland, people from the Baby Boomers generation, due to their experience of life under communism, are attributed with the mentality of the so-called *Homo sovieticus*. This term describes an individual who is too passive, completely incapable of taking responsibility for his/her fate, especially in the economic dimension. What *Homo sovieticus* once expected of the communists, is now expected from the capitalists in the belief that it is the duty of the state to satisfy his/her problems. Thus,

despite the passage of time, the attitude of people from the Baby Boomers generation has not completely lost its relevance (Posthuma and Campion, 2009, pp. 158-188).

Generation X (Glass, 2007, pp. 98-103) is marked by the advent of the Internet, historic changes such as the fall of the Berlin Wall and the end of the Cold War. These people are great promoters of technology, influenced by being born during the development boom (Madeira, Kapoor, and Solomon, 2011, pp. 308-318). Despite the fact that this generation was born in times of great change, it does not need the Internet to experience moments of relaxation (Ozkan and Solmaz, 2015, pp. 476-483). People of this generation reject the world created by marketing, living with a sense of so-called 'omission' by history because no significant historic changes have occurred during their lives.

Members of generation Y were born during the demographic boom of the 80s and early 90s (Smolbik-Barley, 2013, pp. 89-98). Generation Y are multi-tasking employees, ready for new challenges, valuing flexible working time, open to relocation, as well as strongly engaged in their work (Gadommska-Lila, 2016, pp. 3-11). These are people familiar with the new technology, who value teamwork and collective action (Ozkan and Solmaz, 2015, pp. 476-483). They exhibit an attitude of self-confidence and are referred to as highly socialised individuals (Lester, Standifer, Schultz, and Windsor, 2012, pp. 341-354).

Generation Z is the next generation following generation Y. In the subject literature it is also referred to as generation C (from the English word 'connected', i.e. connected to the network), and there is no unequivocal agreement as to the age of people of this generation. Most often it is assumed that these are people born after 1990, while according to other sources, after 1995 (Hysa, 2016, pp. 386-387).

According to Tulgan, this generation includes people born between 1991 and 2000, which means that many of them have not yet completed their education. However, some of them have already become employees of modern companies (Tulgan, 2009, pp. 12-45). Their digital competences remain more advanced compared to Generation Y, but in many respects they are very different (Half, 2015, pp. 12-34).

Generation Z often only just began to appear on the labour market, take their first professional steps as apprentices or interns (Bal and Reiss, 2011, pp. 24-35). Therefore, anticipating the characteristics of this generation in the context of their work must be presented in the category of a forecast. A significant feature is the fact that for Generation Z, the virtual and real worlds merge into the same reality, and that they can no longer do without the everyday use of the Internet and electronic media; the slow disappearance of the written word can be observed (Lorsch, 2010, pp. 411-429).

This generation is interested in making an immediate professional career with a minimum of effort. The vision of an arduous career path remains difficult for them to accept. In addition, they are characterised by high mobility, knowledge of digital technology and good knowledge of foreign languages. Unlike older generations, the propensity to take risks can be an object of fascination for them. Stability in the workplace is no longer a priority. Generation Z avoids routine, willingly goes on

foreign internships, values group work more than individual work, eagerly reaching for new methods of work, and performs with easy many activities at the same time.

In today's turbulent labour market, members of different generations with different lifestyles, values, ways of communication, motivations and needs exist at the same time. Certainly, each of the generations is characterised by a different degree of their use of ICT.

3. The importance of ICT in intensifying prosumption processes

The condition that determines the survival of companies on the market remains the ability to retain their customers, recognising and meeting their needs. Such actions result in establishing positive relations between the customer and the company. In order to meet today's requirements, enterprises use modern ICT tools, enabling the creation of a coherent database about the customer, and then using it for the needs of the organisation (Carolyn, 2015, pp. 39-44).

ICT, in the most general sense, includes both the hardware and software used to collect, process, analyse and transmit information stored in digital form. Their dissemination and development in various spheres of the economy is closely related to the inventions that have occurred in the field of electronics. Functioning in the information society, one should take into account that information technologies are an inseparable element of the functioning of every company (Carolyn, 2015, pp. 39-44).

ICT, as a very broad concept, covers all IT applications, as well as complex systems, allowing for the implementation of data processing and transmission at a higher level of abstraction than the hardware level. ICT solutions owe their development to highly qualified staff and innovative expenditure (Martucci, de Felice, and Schirone, 2012, pp. 34-56).

Hence the role of the company's employees is so important, as they use ICT on a daily basis, bearing in mind that constant competition on the market forces the use of more and more modern information technologies in order to be able to meet the expectations of customers and maintain their position on the market. Information technologies in management are based on quick access to reliable information, which allows to make rational decisions, and in turn, translates into greater prosperity of the company. In particular, as society remains in constant transformation and technological innovations have continued to appear in highly developed countries for many years, computer-aided management methods play an important role in the field of business management. These systems have quickly permeated into various areas of business management (Pręgoski and Juza, pp. 701-709).

ICT has become a measure of a company's ability to stay in the competition. The effective use of information makes it possible to react quickly to turbulent and unpredictable changes in the environment. At the same time, companies must have the appropriate equipment and system at their disposal in order to analyse such

data, therefore the effective use of ICT fits into modern business management concepts. The modern strategy of a company's survival on the market assumes offering the highest quality of customer service and striving to cooperate within it, among others, through the use of ICT tools (Raišienė, Bilan, Smalskys, and Gečienė, 2019, pp. 34-56).

4. The use of ICT by different generations

4.1. Test method

To achieve the research objective, primary research was carried out. Primary information was collected using a survey research technique and questionnaire interview. The obtained empirical data were analysed using selected statistical methods. The survey was conducted in January 2021, during which time a questionnaire was sent online to respondents. During the study, the standards of the CAWI technique were used. The results of the surveys were developed using the SPSS Statistic program.

The research was conducted among 300 people from different generations employed in Silesian enterprises. The survey was divided into two parts: the model and the research part. The model contained sociodemographic data of the respondent (gender, age, occupation, education, professional activity).

Men made up 53% of all the respondents. As for their age, they were grouped by the name of their generation, described in the theoretical part. Thus Baby Boomers accounted for 12%, Generation X – 32%, Generation Y – 48%, and Generation Z – 8%. Among the surveyed population, 18% had higher education (second and third degree), 26% – undergraduate, 32% – secondary, 15% vocational, and 9% had only primary education; 95% of the survey respondents worked professionally.

4.2. Results of empirical studies

The survey demonstrated the degree of use of ICT solutions by employees of Silesian companies from different generations (the test results are presented in Tables 1 to 4).

Table 1. Research on the degree of use of ICT solutions of Baby Boomers

	Definitely yes	Rather yes	Neither yes nor no	Rather not	Definitely not
Every day at work I use telecommunications and IT equipment	14%	31%	35%	9%	11%
Using telecommunications and IT equipment is difficult for me	16%	4%	21%	27%	32%

I am computer proficient	24%	35%	14%	16%	11%
I am proficient in using a smartphone/phone	44%	31%	8%	11%	6%
I am proficient in using new programs	21%	13%	25%	11%	30%
I am proficient in the use of mobile devices	14%	21%	17%	14%	34%
I am proficient in the use of mobile applications	16%	13%	26%	20%	25%
I take part in training to improve my digital competences	15%	8%	21%	20%	36%

Source: own study based on research.

Table 2. Research on the degree of use of ICT solutions of Generation X employees

	Definitely yes	Rather yes	Neither yes nor no	Rather not	Definitely not
Every day at work I use telecommunications and IT equipment	24%	32%	24%	17%	3%
Using telecommunications and IT equipment is difficult for me	5%	5%	31%	39%	20%
I am computer proficient	44%	35%	14%	6%	1%
I am proficient in using a smartphone/phone	54%	33%	6%	2%	5%
I am proficient in using new programs	30%	24%	20%	16%	10%
I am proficient in the use of mobile devices	14%	21%	17%	14%	34%
I am proficient in the use of mobile applications	16%	13%	26%	20%	25%
I take part in training to improve my digital competences	34%	29%	11%	11%	15%

Source: own study based on research.

Table 3. Research on the degree of use of ICT solutions of Generation Y employees

	Definitely yes	Rather yes	Neither yes nor no	Rather not	Definitely not
Every day at work I use telecommunications and IT equipment	85%	5%	5%	5%	0%
Using telecommunications and IT equipment is difficult for me	2%	8%	13%	20%	57%
I am computer proficient	61%	30%	4%	3%	2%
I am proficient in using a smartphone/phone	44%	31%	8%	11%	6%
I am proficient in using new programs	41%	22%	20%	7%	10%
I am proficient in the use of mobile devices	45%	25%	15%	10%	5%
I am proficient in the use of mobile applications	36%	24%	20%	10%	10%
I take part in training to improve my digital competences	44%	34%	10%	10%	2%

Source: own study based on research.

Table 4. Research on the degree of use of ICT solutions of Generation Z employees

	Definitely yes	Rather yes	Neither yes nor no	Rather not	Definitely not
Every day at work I use telecommunications and IT equipment	95%	5%	0%	0%	0%
Using telecommunications and IT equipment is difficult for me	4%	6%	31%	40%	19%
I am computer proficient	83%	7%	10%	0%	0%
I am proficient in using a smartphone/phone	79%	11%	5%	5%	0%
I am proficient in using new programs	52%	32%	6%	5%	5%
I am proficient in the use of mobile devices	45%	25%	15%	10%	5%
I am proficient in the use of mobile applications	56%	24%	13%	6%	1%
I take part in trainings to improve my digital competences	43%	30%	10%	13%	4%

Source: own study based on research.

5. Conclusion

According to the data from research, members of the Baby Boomers generation have some difficulties in using ICT devices. Many respondents admitted that they find it difficult to use them. One may also add that their digital competence remains the lowest in relation to the younger generations. It would therefore be good practice to organise training for such people, especially since a large percentage of respondents admitted that they do not take part in such training at all.

The digital competences of generation Y, X and Z employees are at a satisfactory level. In particular the youngest people are proficient in the use of ICT devices and almost everyone benefits from working with them every day. A good practice could be the transfer of knowledge between generations, sharing the knowledge challenge. Members of the younger generations could support older employees in operating the IT programs, while the latter would provide them with their experience and substantive knowledge, hence it is so important to skilfully manage human resources of different ages. This topic could be further elaborated in other scientific papers and articles.

Maintaining the equilibrium on the remote market requires emphasizing the improvement of competences in the use of ICT solutions among employees of different ages. Only the maintenance of such a balance will ensure the smooth functioning of a sustainable remote labour market. A good practice would certainly be to monitor the digital competences necessary to use digital media for professional purposes and to organise training courses for employees from different generations.

However, it should be underlined that the article is not free from certain limitations. The test sample presented was not representative. The largest number of respondents were from generation Y. Therefore, it would be worth expanding the research on such a sample of respondents, which would present proportionally the results of research among members of different generations.

It would also be interesting to present the research results in relation to the respondents' gender or education, as well as to describe these relations using the Chi 2 test. These issues may constitute interesting material for future research.

References

- Carolyn, A. M. (2015). From high maintenance to high productivity. *Industrial and Commercial Training*, 37(1), 39-44.
- Chomętowska, B., and Smolbik-Jęczmień, A. (2013). *Zespoły wielopokoleniowe wyzwaniem dla współczesnego organizatora pracy w warunkach nowej gospodarki*. Szczecin: Wydawnictwo Uniwersytetu Szczecińskiego.
- Dwyer, R. J., and Azevedo, A. (2016). Preparing leaders for the multi-generational workforce. *Journal of Enterprising Communities, People and Places in the Global Economy*, 10(3), 3-11.
- Gadommska-Lila, K. (2015). *Pokolenie Y wyzwaniem dla zarządzania zasobami ludzkimi. Zarządzanie zasobami ludzkimi*. Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.

- Glass, A. (2007). Understanding generational differences for competitive success. *Industrial and Commercial Training*, 39(2), 98-103.
- Half, R. (2015). *Get ready for Generation Z*. London: Business.
- Hysa, B. (2016). Zarządzanie różnorodnością pokoleniową. *Zeszyty Naukowe Politechniki Gdańskiej*, 97, 386-387.
- Kaczmarek, P., Krajnik, A., Morawska-Witkowska, A., Remisko, B. R., and Wolsa, M. (2009). *Firma = różnorodność. Zrozumienie, poszanowanie, zarządzanie*. Warszawa: Forum Odpowiedzialnego Biznesu.
- Lester, S. W., Standifer, R. L., Schultz, N. J., and Windsor, J. M. (2012). Actual versus perceived generational differences at work: an empirical examination. *Journal of Leadership & Organizational Studies*, 19(3), 411-429.
- Lorsch, J. (2010). A contingency theory of leadership. *Handbook of leadership theory and practice. Harvard Business Review Press*, 2, 411-429.
- Madera, J. M., Kapoor, C. E., and Solomon, N. (2011). Understanding and managing generational differences in the workplace. *Worldwide Hospitality and Tourism Themes*, 3(4), 308-318.
- Martucci, I., de Felice, A., and Schirone, D. (2012). *Knowledge Exchange between IKEA and Suppliers Through Social and Environmental Strategy* (European Conference on Knowledge Management, Academic Conferences International Limited, Kidmore End).
- Ozkan, M., and Solmaz, B. (2015). The changing face of the employees – generation Z and their perceptions of work (a study applied to university students). *Procedia Economics and Finance*, 26, 476-483.
- Posthuma, R. A., and Campion, M. A. (2009). Age stereotypes in the workplace: common stereotypes, moderators and future research directions. *Journal of Managements*, 35, 158-188.
- Pręgowski, P., and Juza, M. (2011). Twórczość w Internecie. Prosumenci, kognitariat, demokratyzacja. *Zagadnienia Naukoznawstwa*, 4(190), 701-709.
- Pyka, M. (2009). Pomędzy „homo sovieticus” a „homo aemulans”. Uwagi o idei solidarności i potrzebie filozofii pracy w społeczeństwie rynkowym. *Warszawskie Studia Teologiczne*, 1, 103-114.
- Raišienė, A. G., Bilan, S., Smalskys, V., and Gečienė, J. (2019). Emerging changes in attitudes to inter-institutional collaboration: the case of organizations providing social services in communities. *Administratie si Management Public*, 33, 34-56.
- Reisenwitz, T. H., and Iyer, R. (2009). Differences in Generation X and Generation Y: implications for the organization and markets. *Marketing Management Journal*, 19(2), 91-103.
- Smolbik-Jęczmień, A. (2013). *Podejście do pracy i kariery zawodowej wśród przedstawicieli generacji X i Y – podobieństwa i różnice*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
- Tulgan, B. (2009). *Not everyone gets a trophy: How to manage Generation Y*. San Francisco: Jossey-Bass.
- Żarczyńska-Dobiesz, A., and Chomątowska, B. (2014). *Pokolenie „Z” na rynku pracy – wyzwania dla zarządzania zasobami ludzkim*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.