

Learning Problems in a Remote Working Situation: A Generation Z Perspective

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Abstract: The transformations on the labour market related to the work modes, but also to the fact of new pension arrangements allowing early retirement, as well as the massive entry of the youngest generation of workers, known as generation Z, into the labour market, create numerous risks related to the irreversible loss of organisational knowledge, which cannot be replaced by external knowledge. New challenges that appear in modern companies are also connected with the massive implementation of remote work as a result of COVID pandemic. In these circumstances knowledge management and particularly knowledge transfer from employee to employee faced with new obstacles. In the context of the outlined econo-socio-demographic changes, the author of this paper focuses her analysis on answering the question of how remote working influences selected aspects of learning processes in organisations as experienced by Generation Z. The research was conducted in December 2022 on a sample of the Generation Z representatives with the aim to identify their experiences and opinions about the remote type of work. For the research purposes, the Likert scale-based questionnaire technique was applied. The data was analysed in the STATISTICA program using Kruskal-Wallis ANOVA on ranks test, Mann-Whitney test, and the Pearson's chi-square test. The results of the research reveal interesting dependencies between the respondents' opinions and variables such as gender, the industry in which the remote work was conducted, size of the organisation, experience in remote working and the preferred form of work in the future.

Keywords: Learning, Knowledge exchange, Remote work, generation Z

1. Introduction

The knowledge management is based on a principle that all knowledge, both explicit and latent, accumulated by the organisation is readily available to each of its members. This has an impact on decision-making processes and allows the organisation to become more agile (González-Ramos, Guadamillas, and Donate 2023). Knowledge management provides access to knowledge and information, allowing rapid development for those who are able to make good use of it (Schaefer and Makatsaria 2021). Knowledge management is often associated with modern information technology. Thanks to the latter, data streams flow from a variety of sources and can be processed and analysed in many different ways (Duque, Silva, and Godinho 2023). However, some experts on the subject argue that more attention should be paid to the human aspect of knowledge management rather than technological one (Evans, 2005, p. 23; Miković et al. 2020).

Modern technology means that work can also be geographically dispersed to a significant degree. This was demonstrated by the COVID-19 pandemic situation, when employees were redeployed to work remotely (and thus off-site) whenever possible. When we talk about the geographical dispersion of work today, we are more and more often referring to its provision not only from another city, but also from a different country or a continent. Remote working, much like outsourcing, has also become an element of operational cost control (Mueller-Langer and Gómez-Herrera 2022). Re-evaluations are taking place regarding expectations towards work and professional careers (Green 2022). The theme of work-life balance is resonating more and more strongly (Robak, 2017). The transformations on the labour market related to the work modes, but also to the fact of new pension arrangements allowing early retirement, as well as the massive entry of the youngest generation of workers, known as generation Z (Rodriguez et al, 2019; Bencsik et al, 2016;), into the labour market, create numerous risks related to the irreversible loss of organisational knowledge, which cannot be replaced by external knowledge. Part of knowledge 'leaks' out of the organisation, and some knowledge is additionally undervalued (Ritala et al. 2015). The latter specifically relates to the core tasks, that are easy to learn, but cannot be learned in the absence of teachers. In the workplaces, the generations do not work together as before. The master-apprentice relations ceased to exist. In addition, the division between the two latter groups is being blurred. Who is the master and who is the apprentice? Age or position is no longer a dividing line between these groups. The need to recruit staff with slightly different competences, such as exceptional intelligence, communication skills, the ability to solve problems and interpret information, is coming to the fore. At the same time, the demand for knowledge, that sometimes gets invalidated with time, is changing at a significant rate. Employees need to continually update their skills, so the continuous learning is becoming the norm.

In the context of the outlined econo-socio-demographic changes, the author of this paper focuses her analysis on answering the question of how remote working influences selected aspects of learning processes in organisations as experienced by Generation Z.

2. Learning as Part of Knowledge Management

Today, the importance of knowledge, both for organisations and for individual employees, is evident in the redefinition of many management terms. Among other things, the notion of career, hitherto understood as a sequence of positions of increasing hierarchical importance, is changing to a process of accumulation of information and knowledge in the form of qualifications, experience and contacts developed in the course of successive professional roles (Akkermans et al. 2021). Thus, the essence of a career lies in the lessons learnt from one's experiences - in the information, knowledge and views that one acquires and revises in the activities performed throughout one's life (Evans, 2005, p. 29). Such perception of career seems more typical for Generation Z, for whom rigid hierarchical organisational frameworks seem outdated, ossified and stifling to their own development (Dolot 2018; Duffy 2018; Hijzen and Menyhert, 2016; Lazanyi and Bilan 2017; O'Boyle et al, 2017; OECD 2014; Singh and Dangmei 2016; Zwart and Baker 2018).

Knowledge itself is also an increasingly difficult term to grasp, going far beyond what is collected in books. Its definition is now being pondered by philosophers, psychologists, management or IT specialists (Dreesens et al. 2020). As an intangible resource, it is difficult to assess. And its value is only revealed when we know what we want to know and only when we need to know it. New knowledge can emerge unexpectedly in our minds through the association of other seemingly incongruous types of knowledge or information. However, we often have no control over the process of such revelation.

Boydell (Evans, 2005, p. 30) distinguishes four types of knowledge: 'what it is', 'how to do it', 'how to become yourself', and 'how to achieve goals in collaboration with others', as well as three levels of knowledge: 'how to put it into practice', 'how to improve it', and 'how to combine it.' In contrast, Davenport and Prusak (2000) define knowledge as a fluid composition of focused experience, values, useful information and expert insight, providing a basis for evaluation and assimilation of new experiences and information. They emphasise that knowledge is born and proliferates in people's minds. In organisations, it is often recorded not only in documents and databases, but also in customs, norms and procedures. Furthermore, the aforementioned authors emphasise the distinction between information and knowledge (Liew 2007). Information only becomes knowledge by doing one of the following types of analysis: comparison (how does the information about a situation compare to other information?), corollary (how does the information affect decisions and actions), correlation (how does the information relate to the rest of the information you have), dialogue (what do other people think about the information). The views on knowledge cited are only an example of the view present in the literature that emphasizes the importance of human contact in generation and transfer of knowledge (Hau et al. 2013). At the organisational level, an interesting division of knowledge (maintaining, however, a socio-psychological perspective of knowledge) is represented by Evans (2005, pp. 31-33). It divides knowledge into four types:

- I know what - an operational knowledge (the basis for conducted normal day-to-day work);
- I know how - also an operational knowledge, but this time the body of knowledge is hidden in people's minds and consists of our experience of how something works and how to do something;
- I know why - a knowledge defining one's work, its meaning in the context of your strategic objectives;
- I know who - the lion's share of knowledge is in the minds of employees, it is crucial to have a good idea of who is who and what knowledge they have - both inside and outside the organisation).

From a personalisation perspective, knowledge management emphasises the need to build a dynamic working and learning environment that fosters the continuous generation, accumulation and application of individual and collective knowledge in order to discover new values for the company (Dagenais et al. 2020; Evans, 2005, p. 33). Thus, through a socio-psychological view of knowledge as such, knowledge management also focuses on the learning process, including mutual learning. Indeed, this process is a prerequisite for knowledge transfer between employees (Kamei and Ashworth 2023).

Discussions concerning the codifying or personalising approach to the knowledge are not just meaningless musings (Bermell-Garcia et al. 2012). The two approaches give rise to different knowledge management strategies. In the codifying approach, typical for engineering, organisations focus on explicit knowledge. In contrast, in the psycho-social approach, managers focus on tacit knowledge. Its externalisation requires the creation of a conducive environment for the exchange of knowledge because you cannot force a person to share knowledge, nor can you force a person to accept knowledge (Akhmadi and Tsakalerou 2022). Full disclosure of

existing knowledge and acceptance of new knowledge must be guided by one's own volition and readiness lest it will be incomplete or ineffective. In today's reality, the competence to learn effectively and to teach others effectively is increasingly coming to the fore. With this in mind, management practitioners are increasingly often faced with the questions: How to create an environment conducive to learning in a remote working situation? How do you guide the development of the youngest Generation Z employees using the knowledge held by senior colleagues? Or What factors influence young employees' willingness to learn in a remote working situation. The problems and the attempt to address them are also part of this study.

3. Methodology

The research results presented in this paper are part of a quantitative survey entitled: 'Managerial aspects of managing remote working', conducted among young people working remotely, representing Generation Z. The survey was conducted in December 2022. The study presents an excerpt from the results of the research on respondents' opinions regarding the impact of remote working on learning processes. Among other things, the study posed the following problem: how does remote working affect employee learning, which is part of knowledge exchange processes.

The study was conducted with the use of quantitative research methods which utilizes the survey technique. The study included young people from Generation Z with a remote working experience including at minimum the year 2022. The most popular division in the literature assumes that Generation Z includes people born after 1995, although some researchers sometimes include those born in 1990, while others tend to include only those born in 2000 and later (Goh and Lee 2018; Kirchmayer and Fratricova 2018, Lazanyi and Bilan 2017; Bejtkovsky 2016; Hejnova 2015). Due to the fact that there are no statistics concerning the number of people aged 15-34 who perform remote work in Poland, the author focused on the group of young, economically active people representing the aforementioned category. Using the Labour Statistical Yearbook 2021 as a reference, the size of the working population in Poland in the age bracket relevant to this study was estimated to be 4,802,000 people. Table 1 presents the structure of the study population by gender and age. For the population estimated in such a manner, with the following statistical assumptions: fraction size: 0.5; confidence level: 95%; maximum error: 5% the study sample size was set at 384 persons. The study was conducted by a specialist market research agency - Fieldstat Ltd. The survey used quantitative research methods utilizing CATI (Computer Assisted Telephone Interview - 50% of respondents) and CAWI (Computer-Assisted Web Interview - 50% of respondents). The mixed technique was chosen because it allowed to increase the direct contact with the respondent. Contact was made with 2,783 persons working remotely. Some of the contacted people declined to participate, some could not participate due to the survey criteria (e.g., no experience of remote working in 2022), or saturation of the sample in terms of age or gender. The requirement of remote working experience in 2022 was introduced to eliminate the group of workers whose work was organised remotely only due to the COVID-19 outbreak. This is because these workers most often performed their duties and tasks in an extraordinary mode, significantly deviating from the conditions for remote work defined in the literature (Bareket-Bojmel, Chernyak-Hai, and Margalit 2023), with the most basic condition being the freedom to choose this particular form of work (Wiater and Skowron-Mielnik 2023). The opinions of respondents who were forced to perform their work remotely due to external circumstances could therefore lead to false conclusions about their attitudes and beliefs. In the end, 388 correctly completed survey questionnaires were obtained (redundant surveys do not disrupt the planned structure of the study group). The research tool used was a standardised questionnaire consisting of 57 closed statements and 8 questions on the socio-demographic characteristics of the respondents. A Likert scale (the so-called Likert scaling technique) was used for the responses, making it possible to determine the relative intensity of the various responses (Babbie, 2004, p. 192). This form allows for a reliable and quick analysis of the collected material, as well as uniformity and ease of elaboration (Churchill, 2002, p. 309). The research tool (questionnaire) is proprietary and was prepared by members of the research team - employees of the Department of Applied Sociology and Human Resource Management, Faculty of Management, Częstochowa University of Technology.

The STATISTICA software was used in the process of compiling the research results. To assess the significance of differences in the analyzed variables, non-parametric tests were used: Mann-Whitney U test (UMW), Kruskal-Wallis ANOVA (AKW) test, Chi-square test. The obtained statistics were analysed using the publication by A. Stanisz (2006, pp.369-391). Four questionnaire validity procedures have been used: content (Rossiter 2008), face (Czakoń 2014), construct (Cronbach and Meehl 1955) and nomological (Czakoń 2014) ones. The scale reliability was validated using Cronbach's alpha that is a measure of internal consistency ($\alpha = .970019$).

4. Results of the Research

This paper focuses on an excerpt from the aforementioned research on employee learning issues in remote working situations. The analysis covered five indicators, for which the Cronbach's Alpha reliability coefficient was $\alpha = 0,863672$ and which include the following statements:

- remote work necessitates learning new technical solutions;
- remote work involves solving problems on your own;
- remote work promotes learning from colleagues;
- remote work allows one to learn new things more effectively
- remote work allows one to learn from senior staff.

With regard to the analysis of indicators related to learning processes, the following distribution of respondents' answers was noted (Table 1).

Table 1: Percentage Distributions of Responses In Relation to Individual Indicators

Responses	%					
	1	2	3	4	5	Total
A	3.62	12.14	18.35	34.88	31.01	100
B	5.69	15.50	18.35	39.79	20.67	100
C	10.59	28.94	30.23	23.78	6.46	100
D	5.43	17.57	35.92	28.68	12.40	100
E	6.72	15.76	37.73	29.71	10.08	100

1: I completely disagree; 2: I rather disagree; 3: neither agree nor disagree; 4: I rather agree; 5: I completely agree.

Source: Research results

According to the results presented, it can be concluded that the vast majority of respondents, almost 66%, agree with the statement that remote working necessitates learning new technical solutions. A similar, but not as strong distribution of responses is presented by respondents with regard to the fact that remote working involves solving problems by oneself (60% agree or completely agree with this statement). With regard to the statement that remote working promotes learning from colleagues, the distribution of responses is more pessimistic. More than 39% disagree or completely disagree with this statement, while 30% express the opposite opinion. When it comes to the statement that working remotely allows one to learn new things more efficiently, almost 40% of respondents agree with this opinion and 23% hold the opposite view. However, the percentage of respondents without a clear attitude towards this issue is relatively high (35.92%). Similarly, with regard to the statement that remote working allows for learning from senior employees, as many as 37.73% presented an ambiguous attitude, more than 22% disagree with such a statement and almost 40% thinks this statement is true.

In relation to the indicators listed, the extent to which respondents differed in their answers has been analyzed, taking into account independent variables such as:

- gender,
- age (for the purposes of the study, it was assumed that the sample group of Generation Z representatives would be divided into three subgroups: 15-24 years old, 25-29 years old, 30-34 years old, in order to ascertain whether there are differences in opinion between the youngest and oldest generation representatives)
- the industry in which the remote work was conducted (the classification of industries adopted in the study is in line with the Polish Classification of Activities (https://stat.gov.pl/Klasyfikacje/doc/pkd_07/pkd_07.htm),
- size of the organisation (taking into account the number of employees: micro (1-9 employees); small (10-49); medium (50-249); large (more than 250)),
- experience in remote working (up to 6 months; 6 - 12 months; 1 - 3 years; more than 3 years),
- position (managerial, production)
- and the preferred form of work in the future (stationary, hybrid, remote).

Non-parametric tests were used to assess the significance of differences in the analysed variables. The distribution of results is presented in Table 2 - the table only shows statistically significant differences, which allows us to reject the null hypothesis H_0 that there are no differences due to the independent variable, which allows us to accept the alternative hypothesis H_1 that there are such differences.

Table 2: Kruskal-Wallis ANOVA and Mann-Whitney U tests for independent variables and selected indicators

Independent variables AKW/UMW test at the assumed significance level ($\alpha = 0.05$)	Analysed indicators				
	A	B	C	D	E
Gender (UMW)	-	-	$p = 0.0059$	$p = 0.0276$	$p = 0.0056$
Age	-	-	-	-	-
Industry	-	-	$p = 0$	$P = 0.006$	$p = 0$
Size of the organisation	-	-	$p = 0$	$p = 0$	$p = 0$
Remote working experience	$p = 0.0025$	$p = 0.003$	-	$p = 0$	$p = 0.0004$
Position (UMW)	-	-	-	-	-
Preferred form of work	$p = 0.0498$	$p = 0.0002$	$p = 0$	$p = 0$	$p = 0$

Source: Research results

In the light of the results presented for the significance tests, it must be concluded that the internal structure of the respondent sample in reference to age or position did not differentiate the responses on the issues in question.

Gender influenced respondents' opinions related to learning from colleagues, learning new things more efficiently and learning from senior staff. Men (35% of men surveyed) are more likely than women (23% of women surveyed) to recognise that remote working allows them to learn from their colleagues. The divide is even more pronounced with regard to learning new things, with almost 46% of men agreeing with this statement, as compared to 35% of female respondents. Similarly, when it comes to learning from senior staff, men have a much more positive outlook (34%) than women (25%).

The responses to questions on learning from colleagues and learning from senior employees were differentiated by the industry in which the remote workers were surveyed. Due to the extensive classification of industries (survey covered employees representing 19 different industries), the analysis of the significance of differences focused on the industries with the highest representation:

- Wholesale and retail trade; repair of vehicles - 26 respondents,
- Information and communication - 84,
- Manufacturing - 77,
- Water supply; sewage and waste management and recultivation activities - 33,
- Financial and insurance activities - 16,
- Real estate activities – 24,
- Professional, scientific and technical activities – 45,
- Health care and social assistance – 21.

A detailed analysis of the bivariate tables on the distribution of respondents' answers indicating statistically significant differences reveals interesting regularities. The elements of learning in the context of remote working are assessed most favourably by employees working in industries not traditionally associated with remote working, i.e., manufacturing, water supply, sewage and waste management, recultivation, and real estate activities. In industries where, according to the Polish Classification of Activities (https://stat.gov.pl/Klasyfikacje/doc/pkd_07/pdf/rozp_24_XII_2007.pdf), a significant share of remote working can be expected, such as financial activities, the IT sector or commerce, opinions on learning are moderately unfavourable, while in industries identified as highly specialised, such as professional, scientific and technical activities or health care, respondents had a strongly negative attitude towards the possibility of individual or mutual learning during remote work.

Difference significance indicators also demonstrate the impact of the size of the employing organisation on opinions related to learning during remote work. The least favourable statements were expressed by employees working in micro-organisations while the most favourable ones are found in small organisations. In medium and large organisations, positive feedback was also noted, but not as pronounced as in the case of small organisations.

Another variable conditioning respondents' statements was the experience of remote working. The issue of learning new technical solutions has been assessed negatively to a significant extent, regardless of the experience of remote working. Similar assessments were presented by respondents with regard to the statement that working remotely allows one to learn new things more efficiently. At the same time, the critical attitude was to a large extent proportional to the remote working experience. With regard to the statement that remote working involves solving problems as work by oneself, respondents showed the more optimistic outlook the higher their professional experience was. Among all groups, the respondents with shortest experience reported that they need to deal with work problems alone most often. And those with the longest experience of working remotely strongly disagree with the statement that remote working involves solving problems on one's own.

The most interesting distributions of responses to the questions, confirmed by indicators of significance of differences, were recorded in relation to the preferred form of work in the future. The distribution of indications is interesting because among the respondents who have been working remotely in 2022, only 68 of them would like to continue working in this mode, while 109 respondents preferred hybrid mode, and as many as 210 opted for stationary mode. The following patterns were observed in relation to selected learning indicators. Employees choosing remote working as their preferred mode of work in the future most often responded that remote working does not force them to learn new technical solutions (76% of the answers given, 6% were of the opposite opinion), does not involve independent problem solving (76%, 5% thought otherwise), but at the same time does not facilitate learning from colleagues (75%, 10% expressed the opposite view), does not allow them to learn new things more efficiently (69%, 10% thought otherwise) and does not allow them to learn from senior employees (50%, 15% were of the opposite view). With regard to employees choosing to work in stationary form, the distribution of responses looked slightly different. Although also in this group 60% of the respondents confirmed that remote working does not force one to learn new technical solutions (20% thought otherwise), 53% do not think that this type of work involves solving problems on one's own (29% have the opposite opinion), and 55% states that it does not facilitate learning from colleagues (28% have a contrary opinion), but only 25% do not think that remote working allows them to learn new things more efficiently (32% have opposite opinion) and 18% report that remote working does not allow them to learn from senior employees (50% have opposite opinion).

5. Discussion

There is a limitation that needs to be pointed out when considering the research results presented hereby. At the time of results analysis, no published studies on a similar issue could have been found, especially in the context of Polish labour market. This is somewhat of an obstacle, as the lack of comparative material does not allow the correctness of the research assumptions and conclusions made by the researchers to be fully verified. It should be emphasised that the survey design team made a deliberate research assumption that the remote working experience must include the year 2022, in order to eliminate the subgroup of employees who were transferred to remote working due to the COVID-19 pandemic from the group of employees with a short experience of remote working. This was done, because members of such subgroup very often performed their duties without proper preparation for remote working. In 2022, the epidemiological situation was already under control in Poland and workers doing remote work did so on their own volition or as a result of a planned organisation of work in the workplace and not as a result of external circumstances.

The first basic conclusion emerging from the picture of the survey results is that age was not a differentiating factor as far as the answers to the questions are concerned. This means that, contrary to expectations, the age group defined as Generation Z, although quite stretched in the survey (15-34 years), is relatively homogeneous. Much more relevant to the issue of learning is the remote working experience. As the latter increases, the pressure to learn new technical solutions decreases, the ability to use technology for collaborative problem solving increases, but at the same time there is a growing awareness that this form of working is not conducive to learning new things more efficiently and learning from senior staff.

Women express much more critical attitudes towards remote working than men when it comes to issues of learning. Perhaps this is a result of the greater importance of interpersonal relationships in the workplace, and more social expectations of work in case of women.

It also seems that the more specialised the work the respondents did, the more learning constraints they recognised in performing their work remotely. In industries dominated by knowledge that is operational, explicit, and easy to codify and share, opinions on the impact of remote working on learning were much more favourable.

Also interesting is the observation indicating the impact of the size of the organisation on opinions about learning in remote working situations. In this case, of note are employees who believe that remote working does not promote independent problem solving learning from employees and learning from senior employees. The larger the organisation, the more favourable the opinions on the issues mentioned are, with the most optimistic statements being found among employees working in small organisations. It seems that micro-organisations lack sufficient intra-organisational stock of knowledge - a critical mass of knowledge. Learning in such organisations relies on the search for external sources of knowledge, which arguably poses difficulties that also include additional spending. As organisations grow, their structural capacity to organise work and the flow of information and knowledge also increases. At the same time, in small organisations there is the added benefit of a small number of employees who may know each other personally, facilitating direct contact. The superimposition of social relationships on structural networks for knowledge exchange and learning is a significant facilitator in this case.

Of the employees surveyed, more than half would prefer to work in a stationary mode in the future, but among those who declared to work remotely, it seems that the employees are fully aware of all the benefits and disadvantages this mode of work entails (Krzyżanowska 2020; Ewers and Kangmennaang 2023), also in terms of learning.

6. Conclusions

First and foremost, the conclusions of the research reveal that, when analysing the various aspects of the impact of remote working on elements of knowledge management, particular attention should be paid to the industry in which the organisation operates and the size of the organization itself. Any organisational knowledge is important and contributes to a company's competitiveness, but some organisations operate with highly specialised knowledge and in such cases special attention should be paid to creating an environment conducive to learning - knowledge transfer (in technical, structural and social terms). With regard to the socio-demographic factors of knowledge sharing, i.e., learning in the context of remote working, it is important to note the issues of the different needs expressed by women and men in this respect, as well as the importance of experience in working in such mode. This is because remote working requires the development of a different set of competences (from both the employee and the organisation), enabling the creation of a kind of 'prosthesis' of the classic forms of building and maintaining employment relationships that condition mutual learning. The issues analysed seem extremely interesting in the context of the ever-increasing popularity of remote working and the increased participation of Generation Z in the labour market. The study should be developed with use of qualitative methods.

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