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Information literacy of Polish state administration officials in the context of the concept of "good governance"

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Abstract

The article presents the results of research on information literacy (IL) of employees of selected state administration offices, those in which the concept of improving the quality of work, named "good governance", has been implemented. The first aim of the study was to determine the components of IL necessary for state administration employees and the deficiencies occurring in this respect. Another goal was to develop research methods and techniques which would be useful to achieve the first aim and to identify challenges of this study. The research was conducted in two stages. The first of them, carried out at the Lublin Provincial Office in Poland, was aimed at determining the information needs of individual official positions, identifying the IL essential for officials and the shortcomings in this regard. At this stage, the following research methods have been used: analysis of cards describing individual job positions in the office, the method of mapping knowledge in the office and the method of focused group interview. The second stage of the research was carried out in five provincial offices. This time, the main goal was to check whether the questionnaires developed by Polish researchers to study the information culture (the system of human attitudes towards information) of various social groups could be effectively used to study the IL of officials. It was assumed that the information culture of staff determined their ability to undertake information activities, including untypical ones, expected from them in line with the concept of "good governance".

The conclusion reached was that IL of employees was underestimated in the current practice of state administration. A set of components of the information skills useful for working in various office job positions have been developed. It was reported that the information culture of the studied group was characterised by an optimistic perception of their own skills and their professional usefulness. Studies have shown that obtaining conclusive results indicating the level of specific information skills in the office environment is often not possible for reasons beyond the control of a researcher. Traditional IL testing methods are assumed to fail there. This is due to the Dunning-Kruger effect (Kruger & Dunning, 1999), as well as constraints imposed by the way offices function and decisions of the management of the office. It seems that achieving more precise results requires establishing close cooperation with the management of an examined group. Undertaking such research is necessary in the context of implementing the concept of "good governance" and a model of one of the methodologies has been presented in the article.

Keywords

assessment; good governance; government; information culture; information literacy; organisational culture; Poland; self-assessment; workplace learning

1. Introduction

For several years, that is since joining the European Union in 2004, state administration in Poland has been undergoing reforms aimed at adapting its performance according to the principles of "good governance" formulated in the 1990s by the World Bank. In Poland, the concept of "good governance" is defined as the practice of governance and administration based on the following elements: efficiency of government, that is the ability to effectively, fairly and economically implement public policies; supporting the development of the economy; openness to social dialogue; social participation; clarity and transparency of the functioning of authorities and administration and their accountability. It is emphasised that "good governance" also involves developing the administrative capacity of public institutions, including increasing the responsibility and quality of administrative staff to improve the quality of public services, and modernising the administration performance (Ministerstwo Rozwoju Regionalnego, Departament Koordynacji Polityki Strukturalnej, 2008).

Public administration system in Poland consists of government and local government administration. Government administration bodies are ministers, central government administration bodies, voivodes (official in charge of the local administration) and acting on their behalf other government administration bodies. Local government administration occurs at the voivodship (territorial division unit) level (marshal, regional council, voivodship board), county (staroste - official in charge of local government, county board, county council) and commune (president, mayor or commune head, commune council).

In the technical and technological reality of the 21st century, when the role of information and information resources and the tools available on the internet are increasing, the efficient functioning of administration, known as “good governance”, is not possible without an appropriate level of information literacy (IL) among civil servants. Without IL, it is not possible to effectively perform administrative tasks, provide the public with proper access to public information and many services, solve problems efficiently, and ensure transparency of government and administration activities, as the literature review will demonstrate.

Research on IL has been conducted in the provincial offices - auxiliary units of the voivode and other government administration bodies. The reason for undertaking research in these offices was the fact that they have been implementing the principles of "good governance" for several years.

For many Polish employers and senior administration executives, the sphere of IL is basically limited to mastering IT skills as well as the ability to use an internet browser and MS Office suite (Jasiewicz, 2012). With regard to state administration, it should be added that all office workers, specialists and managers are expected to possess such IT skills (Jasiewicz, 2012). In the document "Strategy for management of human resources in the civil service until 2020" (Kancelaria Prezesa rady Ministrow, 2013) we can read that one of the priorities is constant improvement of the professional skills of civil service corps members through lifelong learning. It was assessed that treating the professional development of administration employees as a priority may have positive impact on the attractiveness of working in the civil service – it may help to attract and retain candidates for public administration positions. Unfortunately, the abovementioned document does not indicate IL, only a concept with a far narrower meaning is mentioned – the use of modern technologies.

Even in the parts of the document which relate to such key aspects as: increasing the professionalism of civil service corps members, shaping a positive image of the civil service, as well as good practices in administration, information competence is not considered. According to the

author, this is caused by a preference for the legal knowledge of candidates for work in state offices, and at the same time an underestimation of the IL of officials.

2. Literature review

2. 1 Research on IL in a professional environment

Academic sources dealing with research on IL indicate that for many years the skills of participants in the formal education process have been the main area of study. However, for more than a decade the number of studies on how people seek and use information in professional and personal life has increased (Forster, 2017; Head, 2017). In addition, limiting the area of studied IL to formal education has been subject to criticism. Researchers have been noticed to marginalise the interest in graduates' use of IL in personal and professional life (McClure, 2013). There have been claims that the search for universal IL, unrelated to the situation of a particular user, principally does not seem reasonable (Lloyd, 2010). It has been concluded that the information skills used in schools are significantly different from those required in the workplace where it is crucial to enhance employee productivity for the sake of common aims of the company. It has been found that information issues in the workplace are more ambiguous than those in educational settings as the professional environment is more variable and disorganised (O'Farrill, 2010; Head, 2017; Lloyd, 2011; 2013).

Information needs and behaviour in the workplace are associated with business challenges which are most often unstructured and unpredictable. O'Farrill (2010) showed that the main IL frameworks do not properly reflect some important ways in which information is used in a professional workplace environment, particularly the use of people as information sources and the social sense making and interpretation of the value of information and its application in the workplace environment. On the other hand, as Head (2017) wrote, the necessity of using IL in professional activities cannot be questioned, because access to appropriate quality information is important for staff productivity. Without these skills it is difficult to solve problems and gain competitive advantage in the 21st century. It is an important fact that due to the influence of information and communication technologies professional performance is evidently subject to transformation. A modern, multimodal (in such a workplace, the employee performs various activities, uses several devices and technologies, and a lot of data and information resources) information-based workplace requires employees who are able to cope with overload and uncertainty caused by the exponential growth of the amount of information and the use of the aforementioned technologies (Lloyd, 2011; 2013).

It is emphasised that employability, based on an individual's professional skills which also include IL is currently a prerequisite for most employees to be able to build a professional career in the labour market (Pawlak, 2014). An employee should be able, among other things, to effectively locate, evaluate, organise, and use information, as well as to create and present it to recipients (Goldstein, 2016). IL in the workplace is identified not only with individual, technical skills, but increasingly with the ability to meet information needs in a team, to improve information environment in the workplace and to self-improve both the individual and the team (Lloyd, 2011). In the context of teamwork and collective dimension of IL, the following useful skills are indicated: sharing a set of documents, organising space for cooperation, planning meetings and group activities, making collective decisions, synchronous remote work, using co-workers as a source of information, managing incoming and outgoing information, collective creation of documents and content by the team (Collard et al., 2016).

In the case of public administration officials in Poland, the available academic literature focuses not so much on describing the results of professional skills tests as on indicating the need to diagnose and improve the skills of workers in the context of professional efficiency (Król & Ludwiczyński,

2008). IL is mentioned neither in the scarce number of publications on the skills of public administration employees (Hysa & Kowalczyk, 2014), nor in the works devoted to knowledge management in offices (Krawczyk, 2010; Suchodolski, 2015), nor in the texts on the professional development of public administration employees (Marzec & Szymaniec, 2013). The analysis of academic publications indicates that in Poland there has been no research conducted on which specific components of IL are useful in the work of public administration officials, nor what is their actual level at present.

2.2 Contemporary challenges for IL

An intensive development of digital information infrastructure has become a real challenge for IL. The term information infrastructure became widespread thanks to the program documents concerning civilization changes leading to the formation of information society issued by the OECD, G-7, European Union and the US government (Osiński, 2018). Information infrastructure has been mentioned in the context of development of the internet. One of the relevant definitions of information infrastructure formulated by John P. Pironti (2006) is worth repeating here. Information infrastructure included all people, processes, procedures, tools, devices and technologies applied in the process of creating, using, transmitting, storing and processing information. For the considerations on the IL of public servants, the definition by Claudio U. Ciborra and Ole Hanseth (1998) is also important, claiming that information infrastructure can shape not only work procedures and methods of operation, but also the perception of these practices. Employees and citizens with a relatively high level of IL treat their use in various situations as 'typical, ordinary' and see it as necessary. According to this definition, information infrastructure seems to be a factor supporting the acceptance and personal implementation of specific organisational solutions and practices.

The digital part of the information infrastructure, useful in professional work and lifelong education, includes: online sources of bibliographic information (bibliographic databases; general, specialist and specialised bibliographies; online library catalogues; websites of publishing houses); full-text sources of information and knowledge (e-book resources, online magazines, digital library and repository collections, controlled content sites, specialised information portals, online educational and scientific resources); as well as data and information search tools (general and specialised search engines, data aggregators, magazine indexes, online catalogues) and applications for collecting, organising and processing digital materials (Osiński, 2018). Osiński developed this list by conducting research on the development of educational and scientific resources of the Internet. The possibilities of using digital information infrastructure largely depend on the level of individual IL.

The level of obtained skills determines the area of the existing information space in which a person is able to work efficiently and their individual information space (Osiński, 2018). To explain this problem, we will use the most general definition which claims that information space is a multidimensional, dynamic, open set of contents (data, information and knowledge), their carriers and users (their minds) (Kisilowska, 2011). Thus, if after reading the Kisilowska (2011) model, we assume that information space is the total content (knowledge and information) placed in the information infrastructure (digital and analogue) and in the minds of people, then individual information space will be the part of the content present in the mind of a specific person and in their familiar and accessible information infrastructure. Therefore, expanding the knowledge of each person and their IL requires the expansion, through education, of the information infrastructure known to them and available to them, as well as changes in information awareness. Since the formation of appropriate professional skills without a properly developed individual information space of a given person is not realistic, it should be assumed that the level of information skills has a direct impact on the ability to work effectively. According to the author of this article, every employee who uses information, uses the resources of their individual information space.

In addition to this, one should be aware of the existence of a relatively new space in which communication between people and organisations occurs which is the internet and Intranet. Therefore, IL of employee should particularly include the efficiency of using computer hardware, software, as well as the internet.

2.3 Defining information culture

For the reasons explained in section 3.5, the author used the concept of information culture and the tools used to study it. Therefore, it makes sense to briefly present this concept. The concept of information culture is cited by researchers representing various disciplines: information science, sociology, psychology, pedagogy, law, media and social communication, management sciences, economics and cultural studies, as it determines many aspects of functioning of the state, organisation, society, and also human life (Ubermanowicz & Paprzycki, 1996). From this work, it is inferred that the system of human attitudes towards information is always in the centre of this concept. It is closely related to both the information user and the environment in which she/he functions. Despite the differences in definitions, resulting from the specific nature of individual disciplines, information culture can be explained in an interdisciplinary or even universal way. Undoubtedly, it is a part of human culture influencing a person's functioning both in the natural environment and in the contemporary virtual world. It is a higher form of consciousness development than literacy, externalised in behaviour ethics, prudence and accuracy of choices, professional competence and life wisdom (Ubermanowicz & Paprzycki, 1996). The information culture of each information user is their unique, separate area of life and activity, covering the sphere of necessary resources, such as: technology, information technology, expertise and information skills, the sphere of collective information awareness, the sphere of selected behaviour resulting from participation in the information process and based on the ethics of the principles of social coexistence resulting from the use of information (Batorowska, 2009). In the opinion of Hanna Batorowska, the area of information culture is shaped by: information awareness (an individual's orientation in terms of functioning in the world of information combined with general knowledge on the subject, understanding the nature of the media, awareness of the threats arising from uncritical navigation in the sea of information) and the system of values (values, norms, ideas, beliefs justifying the need for informational education). The two factors induce positive attitudes towards information (in-depth knowledge and emotions), and accordingly the attitudes lead to informational behaviour which may assume different forms depending on the motives for reaching for information, education, and methods of obtaining information (Batorowska, 2009).

It is estimated that the current desired level of information culture is manifested by understanding the importance of information, a positive attitude to the world of information and to individual IL. Studies conducted in Poland have shown that people with a high sense of self-efficacy positively visualise the results of their actions, whereas those who are unsure of their abilities visualise failures and create negative scenarios (Kamińska-Czubała, 2013). A weak sense of IL and the effectiveness of one's information activities, that is low information culture, translates into a relatively easy resignation from pursuing goals, a low level of motivation and a choice of less ambitious tasks and methods. People with greater certainty of their skills obtain better results as they are not afraid of confronting challenges (Kamińska-Czubała, 2013). In the case of civil servants, the described principle determines their ability to undertake various information activities which acquire considerable significance in the realities of implementing the good governance principles.

3. Research aims and methods

3.1 Research aims

For the purposes of the research described in the paper, the concept of "good governance" implemented in Polish administration was assumed to require high qualifications of officials, and in the 21st century those are based, among others, on IL. Currently there is no knowledge available as far as the state of IL of public administration employees in Poland is concerned. Specific methods and techniques for testing IL in this professional group have not been developed. Therefore, the author conducted the present study in order to determine the specific components of the IL necessary for the officials and possible improvements to be made in this area. Another aim was to develop study methods and techniques useful to achieve the first aim and to identify drawbacks of such research. The obtained results should help the executives of the offices implementing the concept of "good governance" to understand how IL can contribute to good governance and also to plan and to monitor the development of IL of their employees. For researchers on the issue of IL in the realities of professional environment, the described results should indicate the problems which can occur in the process of conducting such studies in state administration offices.

3.2 Problems with the selection of methods for testing IL

The basic methodological problems arising during the research on IL were well defined by Helena Hollis (2018). She stated that in the academic literature there are many tests and measures available to be used to evaluate IL in which participants are most often asked to self-assess their own knowledge and skills. They may be useful for researchers who want to learn how respondents perceive their skills, however, they are not suitable for actual measurement of IL. The study participants, when asked for self-assessment, are assumed to diagnose their skills well, and also correctly remember what they did well, or what kind of problems they experienced. However, the assumptions were not confirmed by the H. Hollis study. In addition, the Dunning-Kruger effect (Kruger & Dunning, 1999) proves that participants with very low skills often tend to show an overly positive self-perception and judgment of their skills. That is why it is important to treat self-assessment as a useful tool, but only in analysing the feelings and views of respondents. Van Deursen and van Dijk (2010) raised similar objections a few years ago. They emphasised that respondents with poor skills often overestimated their expected results, which was caused by a lack of ability for meta-cognitive judgment (based on higher order thought processes) and not realising their own incompetence. They also found that individuals with high skills often underestimated the expected results. Therefore, the only way to obtain an objective measurement of IL is to test relevant skills in a direct and practical way.

Another problem, noticed both by Hollis (2018) and van Deursen and van Dijk (2010), is that the vast majority of IL tests were developed with formal education in mind, and their structure was influenced by sets of specific skills contained in the curricula for individual studies and courses. The purpose of such tests is to internally assess specific student populations, not to generally measure IL in any group of people. The analysis of the tests, conducted by Hollis (2018), made her conclude that actually there are no universally applicable tests and measures of IL, regardless of the studied group of subjects. Only the tasks involving information search according to specific criteria, or search for the data helpful to solve a specific problem can be useful. However, this solution will not be beneficial in the situation where the test group can be studied only in a relatively limited time span and the researcher is unable to manage the significantly increased workload resulting from assessing the responses. According to Hollis, the type of study used by Catalano (Leichner et al., 2014) is easier to conduct as the respondents do not generate free statements but choose from several proposed answers.

Another article on the topic (Leichner et al., 2014) shows that in the opinion of many researchers, tasks based on information retrieval show a greater similarity to the tasks performed in the real world than those in a standardised test. It is therefore reasonable to assume that they measure the ability to solve information problems better than a standardised test. Therefore, it is presumed that the quality of task performance based on information retrieval (similar to actual search tasks) can be interpreted as an indicator of individual IL in real life.

3.3 Research questions

Given the above views on the one hand and the reality of the functioning of a state administration office on the other, the author asked the following research questions:

- is it possible to precisely determine the set of IL necessary for officials?
- can a researcher not belonging to the management of the surveyed office diagnose the level of IL as he/she, due to the model of functioning of that office, is not able to monitor the quality of tasks performed by individual employees on an ongoing basis without disturbing the work routine of the office?
- what research methods and techniques can be effectively used in examining the IL of the aforementioned professional group?

3.4 The first stage of research

3.4.1 Obtaining preliminary information about job positions in the office

The research was divided into stages, the first of which was to determine the information needs occurring at particular job positions and the related useful IL. At this stage, the employees from the Lublin Provincial Office (LPO, state administration office) were examined. It was decided to acquire knowledge about the skills necessary in an official's work (employed in substantive official positions at all levels of the official hierarchy) by analysing the information needs related to particular job positions. It was assumed that IL should be diagnosed and assessed in the context of actual information needs occurring in specific realities as it is information needs that condition the set of necessary IL and generate their development. Cards describing individual job positions (such cards, developed by the management of the office for all clerical positions, contain information about the scope of duties, official subordination as well as about the required education and skills) were the basic source of data on job positions at the office and related information needs. In LPO, almost 100 cards were obtained. They were analysed by the author to determine what information needs and skills are required for a particular job position. Job advertisements for the vacancies in the LPO published in the media (internet service - Public Information Bulletin) in 2018 were also reviewed. During this period, there were 25 job advertisements. The requirements for job candidates were analysed by the author. Both the job cards and job advertisements were looked at for details of the required information and IT skills.

3.4.2 The knowledge mapping of job positions

The knowledge mapping was used to obtain information about what information is used and produced at individual work positions in the office. Knowledge maps in an organisation are defined as mapping (often in a graphic form) the interrelationships between the intellectual assets existing in an organisation, sources of knowledge, its structures and application (Wachowiak, 2008). Knowledge mapping is also a process, methodology and tool for analysing the areas of expertise which help to determine the location, value and usefulness of knowledge possessed and / or used in the process of solving a particular problem (Saad et al., 2005). Knowledge mapping is based on the identification of the used information and knowledge resources and linking them to specific jobs. Knowledge mapping at a specific workplace allows the researcher to precisely determine what

information resources an employee uses, how he processes and uses this information, to whom and in what form he transfers it, what computer applications he uses for this purpose. In the study, the aforementioned method was used for the job positions, which, according to the management of the LPO, were associated with application of various information resources to perform daily tasks. So knowledge mapping was achieved through carrying out a survey which was completed anonymously by 50 employees indicated by the management. Officials who took part in the survey were indicated by the manager of the Organisation, Personnel and Budget Offices (OPBO) of the Lublin Provincial Office. The office manager was asked to apply the following selection criteria for officials – in his opinion, IL is particularly useful for the performance of duties by a given official. Open-ended survey questions elicited the following information: what resources of materials and data the employee used to perform their duties, divided into external and internal sources; what data and information resources were generated by employees in the course of performing their duties, divided into internal and external office transfers; what types of documents they produced and what computer programs and internet applications they used at work. The information obtained in this way was subjected to a qualitative analysis in order to identify the IL indispensable to effectively meet the information needs of office employees holding various positions.

3.4.3 The focus group interview

In the next stage of the research, the focus group interview method was applied to study the management and employees of the OPBO of the Lublin Provincial Office. This method was used to complete and verify the information obtained in the previous stages of the research. The interview focused on IL, and the questions pertained to the skills required in the recruitment process, the information needs of the office, the use of computer applications and Internet resources by the employees, the degree of independence in searching for information necessary at work and its impact on the shape of documents and forms created, as well as the assessment of the level of IL of the currently employed staff. This method consists in interviewing several people who are simultaneously asked questions by a moderator (interviewer). Due to the nature of the questions the participants focus their attention on particular problems. The specific form of the interview facilitates interaction not only between the moderator and participants, but also between the participants themselves. The moderator draws conclusions of a qualitative nature both from the answers to the questions and from the discussions of the participants. One group of five people employed at OPBO (all employees of this office) have been examined in the study. The moderator asked questions about the requirements for job applicants, the reasons for the lack of IL in these requirements, as well as information resources and IT equipment and applications used by the office employees.

3.5 The second stage of research

The main reason for the implementation of this stage of research were the conclusions from the first stage. On their basis, the author concluded that examining the level of information skills of officials by performing information search tasks similar to actual search tasks can show an easily predictable result. Most likely, the level of information skills would turn out to be relatively high (sufficient to perform tasks typical for an office), as the management of the office takes care of it. On the other hand, the use of typical school tests to check IL is not an ideal solution due to the Dunning-Kruger effect. Therefore, the author has decided to verify what effects can be obtained by using questionnaires used to research information culture. In the second stage of the research, anonymous surveys have been conducted among 765 employees of five voivodeship offices (Lublin, Warsaw, Rzeszów, Białystok, Kielce). The selection of offices was subject to the consent of the management of those offices to conduct the research. Each of the respondents completed four questionnaires which were available on the internet, each of them had a different set of questions, deliberately selected by the author. Study participants were appointed by the management of each office. The management was asked to apply the following criteria for selecting respondents – in the

work of a given official, information competences are particularly useful for the performance of professional duties (such factors as: education, gender and age were not taken into account). The second stage of research was carried out independently of the first stage. This method of selecting participants for the studies and research goals meant that demographic data of respondents were not collected. In this situation, demographic data would not add anything relevant to the interpretation of the survey results.

Therefore, survey forms were developed to study not so much specific skills constituting IL but to investigate information culture, that is a system of officials' attitudes towards information and IL. Such questionnaires could be completed without having to gather officials in a room equipped with computers and without supervision of the researcher. It was assumed that the information culture of officials determined their ability to take various actions in line with the concept of "good governance". As mentioned before, improving the quality of tasks performed by officials requires improving the level of their information culture. The justification for using a specific type of questionnaire for information culture research was demonstrated by studies conducted in Poland (however, these studies were conducted among students, not employees). It was considered that information culture level may be revealed in the course of respondents' self-assessment of their abilities, skills and experience, and the attitudes of the respondents towards information. This kind of survey should contain specially selected stimuli-statements used to study the affective and cognitive indicators accompanying information processes (Batorowska, 2015).

To examine the information culture of officials, the above-mentioned survey, was developed. The author modelled on surveys specially designed for the study of information culture, developed by Barbara Kamińska-Czubała (2016). In the set of survey questions, the respondents were to reveal their attitude to their own IL used in the realities of professional work and assess their suitability for the efficient performance of official duties.

One question was asked in each survey:

1. How often are you convinced that in professional environment you can effectively perform the following tasks: (the respondent should specify how often each of the fifteen activities requiring the use of information is performed in the professional work);
2. How often are you convinced that in professional environment you can effectively perform the following tasks: (the respondent should specify how often each of the fourteen activities requiring the use of various sources of information and information management applications is performed at work);
3. Assess, using a five-level school rating scale [from 1 (unsatisfactory) to 5 (very good)], the level of your own information competence in professional work (the respondent should specify how he assesses the level of thirteen skills that create IL);
4. Assess, using a five-level school rating scale [from 1 (unsatisfactory) to 5 (very good)], the usefulness of specific information competences in professional work (the respondent should specify how he assesses the professional suitability of the same as in survey 3, thirteen skills that create IL).

Bearing in mind the Dunning-Kruger effect, the answers were not intended to provide knowledge about the level of IL of respondents, but about their relationship to their own level and to the professional suitability of specific skills.

4. Results

4.1 The first stage of research

In the case of examining the needs and IL of officials, the basic problem was the fact that the requirements for individual positions specified by expectations of heads of organisational units (shown during recruitment interviews and in job advertisements - method of obtaining information described in section 3.4.1 and 3.4.3) and cards describing individual positions (described in section 3.4.1) basically ignored those needs and skills, they were also not listed separately. The ability to use particular hardware and software as well as the application of legal and statistical knowledge was mentioned only sporadically in the above-noted sources of information. During the conversations with the LPO employees and management (described in section 3.4.3), one could get an impression that an informal rule was applied – everyone would learn in practice what (computer and internet skills) they need. The information was obtained that the job candidates were mainly required to have legal knowledge, and information skills were completely ignored. However, the human resources office was often receiving information that it was precisely the shortcomings in IL that turned out to be the cause of shortcomings in the work of officials. The management of this office admitted that they were helpless in examining the IL of officials and in determining what training could help in this matter. Managers of individual offices indicate to each official precisely which applications and information sources he can use. Skills in this area are acquired quickly. However, any confusion in the applications and sources used, and any situation that requires non-standard actions, causes major problems due to insufficient IL.

Knowledge maps of individual workplaces showed that all of the surveyed LPO employees used the data and information sources which were strictly defined by their superiors (conclusion from the surveys described in section 3.4.2), appropriate for particular positions (mainly: Lex - online legal system, Legalis - legal information system, ISAP - parliamentary system of legal acts, Central Database of Supreme Administrative Court rulings, Central Statistical Office website, Eurostat website, Geoportal) and they did not look for alternative sources. However, according to the employees of the Office of Organisation, Personnel and Budget (OOPB) Lublin Provincial Office (LPO), in the case of tasks and problems that occur rarely, it would be desirable for the staff to be independent in their search for reliable and complete information useful in solving problems of that kind. No difficulties with using formal, official data and information resources were reported in the OOPB LPO.

Everyone used only the computer programs installed on their workstations. First of all, it was the Microsoft Office suite, a web browser, a calendar, a calculator, and EZD (Electronic Document Management) system. The programs did not pose any competence problems. According to the OOPB, the only problem was the insufficient skills of new employees in the use of spreadsheets, however, those issues disappeared with seniority.

Typical tasks of public employees included formulating letters of response to correspondence received from other offices, compiling reports, applications, accounts, lists, summaries, and completing forms. The typical and definitely the most frequent partners in information activities of officials from the provincial office were the co-workers from that office, employees in public administration offices, as well as local government administration. A citizen is the least often served customer type there. According to the OOPB, the application of statistical and legal data to formulate generalisations and logical conclusions posed great difficulties for new employees. The officials were criticised for writing incomprehensible and lengthy texts, therefore the OOPB organised appropriate training for them.

That stage of the research demonstrated that all surveyed employees permanently needed information related to their positions. They used specific sources of information, programs for obtaining, processing and sharing data, and applied them in a strictly defined manner to specific tasks. The set of useful IL was relatively small, and the knowledge achieved in a short period of time was satisfactory to the superiors. For the vast majority of employees, the set consists of:

1. maintaining security while using online resources and tools;
2. locating and searching for information in the resources indicated by the team leader and in selecting them;
3. assessing the up-to-date quality and reliability of collected information;
4. using information from websites with controlled content (recommended by team leader) to perform specific tasks;
5. creating statements, reports, accounts, messages, applications and lists based on the information collected with the office program package;
6. sharing information with co-workers and team leader as well as other recipients;
7. obtaining information from co-workers and team leader as well as from various individuals, companies and institutions, and using it to perform tasks;
8. proper management of information sets on the computer (list based on knowledge mapping in LPO).

However, the implemented concept of "good governance" required a much larger set of IL of the office staff. This results from the fact that the way in which customers are served, the rules of communication with the external environment and the approach to the concept of "professionalism" have been undergoing changes. This conclusion can be drawn from the analysis of the document "Good governance concept - reflections for discussion" (Ministerstwo Rozwoju Regionalnego, Departament Koordynacji Polityki Strukturalnej, 2008) already mentioned in the Introduction.

4.2 The second stage of research

The purpose of the surveys conducted at the next stage of the research was to find the answer to the questions – what was the current level of information culture of administration officials? and – would analysing the level of information culture make it possible to discover deficits in IL? Detailed survey results are included in the appendix.

The author interpreted the data from four surveys, taking into account the research aims and questions (all surveys described in section 3.5).

Survey 1 contained questions about relatively broad skills which actually constitute an important element of information culture – a sense of self-efficacy in information activities. It indicated that the vast majority of respondents, from 90.72% to 98.17% depending on the specific item of the survey, positively perceived their ability to take particular information actions. The most positive indications (I always can, most often I can, usually I can) were revealed by the activities which were noticeably related to the information needs in the studied offices (items 4, 5, 7, 8, 10, 11). Relatively frequent performance of a given action can strengthen self-confidence in this respect. However, of particular interest would be the fact that the activities which were rarely performed or even unsuitable to meet the information needs identified in the surveyed group of employees gained over 90% of positive indications. It is likely that respondents made an assumption that since there are specific informational activities mentioned in the survey, this can suggest that the staff should be able to perform them. Perhaps the respondents decided that even in anonymous surveys it would be safer to present a positive image of their own skills. The conclusion was prompted by unofficial statements of the staff obtained in the course of research, suggesting their fears about stability of employment

in the context of reforms and disapproval of the increased number of training sessions. Another reason for a very positive assessment of the ability to take effective information actions can be systematic and frequent use of computer hardware and software as well as internet resources in the context of private life.

Survey 2 contained questions about specific skills and revealed the next element of information culture – the perception of one's own information skills. The study demonstrated that the vast majority of respondents, from 87.31% to 99.08% depending on the specific item in the survey, positively perceived their information skills (I always can, usually I can, usually I can). This also applies to the skills which, as indicated by the results of knowledge mapping, were not used in professional activities of the employees (items 3, 4, 5, 6, 14). The explanation of the results of Survey 2 can be the same as those of Survey 1.

In Surveys 3 and 4, the respondents rated, using a scale of 1 (insufficient) to 5 (very good), their level of specific IL components and the suitability of those components for their job. The results of both surveys confirm the correlation indicated by surveys 1 and 2 – an opinion on one's own IL depends on the perception of the professional usefulness of these skills. The level of individual skills, considered as very useful, is assessed very positively. The level of those considered not useful is more often assessed less positively and negatively. In the case of surveys 3 and 4, the existence of the said dependence is evidenced by the fact that the respondents comparatively often rated negatively (as 1 or 2) and comparatively rarely very positively (as 5) the components of IL whose professional usefulness was relatively often evaluated negatively and relatively rarely assessed very positively. This applies to items 3, 4, 6 and 13. On the other hand, very good opinions about the level of skills (relatively frequent marks 5 and relatively rare 1 and 2) correlated with the opinions of significant relevance of those skills to work (relatively frequent marks 5 and relatively rare 1 and 2). This applies to items 1, 2, 8, 11, and 12.

The analysis of the responses in the surveys does not allow, however, the drawing of direct conclusions about the level of IL of the respondents. On the other hand, it authorises the thesis that knowledge of information resources and the ability to use them professionally is something important and useful in the opinion of public officials.

5. Discussion

Due to the likely occurrence of the Dunning-Kruger effect, an objective assessment of the staff readiness for the new challenges is not possible with surveys examining the attitude of officials to the level of their own skills. This suspicion results from the findings of the surveys – a very positive attitude of the respondents to all the listed components of IL, even those currently unused in offices. Another barrier was demonstrated to be the aforementioned organisational conditions of research at the offices which ruled out the application of tasks based on a search for information similar to actual search tasks.

Despite these limitations, the surveys requiring opinions on individual IL have been demonstrated to be useful for assessing the level of some elements of the officials' information culture. The appropriate formulation of some questions has shown that the studied group is characterised by perceiving the importance of the world of information for professional life, a great sense of efficiency in their information activities, positive perception of their skills and, most importantly, a sense of the usefulness of these skills for professional activities. According to the findings of Kamińska-Czubała (2013), this state of staff information culture should offer high hopes that they will not be afraid of new challenges. This will allow them to master new, necessary skills efficiently, because they will not approach them with fear or reluctance. However, one should keep in mind the conclusions from

the first stage of the research, which apply to only one office, but there is no reason to believe that the other results would be different. During the analysis of recruitment advertisements, job description cards and conversations within a focus group with the civil servants' teams leaders, one could presume that the issue of IL in the professional activity of staff is not relevant as such skills are not required in the recruitment process. In addition, the team's leaders recommend strictly defined resources and tools for performing daily tasks, which affects the formation of a conviction that only these particular resources and tools have to be learnt and mastered. This discourages monitoring the development of the digital information infrastructure, and especially acquiring knowledge about the elements which would be useful for performing professional tasks and for self-education. This state of affairs hinders the development of individual information space, and consequently the development of the awareness and information culture necessary to meet the challenges of the contemporary world. It does not offer an opportunity to independently seek most useful solutions to perform a specific task and efficiently verify the quality of obtained data, information, materials and applications. It would seem that this state of affairs is in line with the basic principles of office work and can be assumed to be correct. However, the challenges posed by the concept of "good governance" (described in the Introduction) and the occurrence of untypical situations (new, rare, untypical for the daily performance of duties) which employees do not handle well undermine this belief.

Studying IL of persons working in offices is more difficult than examination of pupils and students. It must be conducted in different organisational contexts, often imposed by the organisation's model of functioning. Obtaining unambiguous results indicating the level of specific skills is often impossible for reasons beyond the control of the researcher. As civil servants have permanent information needs arising from the nature of their workplaces and use strictly defined sources of information, the research on the level of their IL based on performing tasks involving search for information close to real search tasks will most likely produce a predictable result. They will demonstrate a high level of these skills, because their team leaders place a great deal of value on them and react to any problems with quality of work using personnel policy tools. An important argument in favour of resigning from tasks based on a search for information similar to real search tasks can be the fact that offices may not have large rooms equipped with an adequate number of computers connected to the internet. Therefore, the performance of these tasks would have to take place during the work of individual respondents, in their offices, beyond the control of the investigator. Then, the independence of performing tasks would not be reliable, in addition the disturbances of the work routine caused by conducting the research would undoubtedly be objected to by office management.

In order to authorise the researchers not belonging to the office management to study IL of the staff, it is necessary to develop a tool which will not only examine the opinions of public officials about their own skills and will not be focused only on the components of IL currently used on a daily basis. The tool should allow the assessment of the level of IL useful both at a given moment and in the near future. The author approached the team leaders with questions useful for assessing information culture, from which, however, only limited conclusions can be drawn regarding the level of IL. It seems that achieving more precise results requires establishing close cooperation with the team leader of the examined group, because it is only they who have the opportunity to systematically observe the quality of tasks performed by the employees making use of IL. They can also test the performance of tasks which they plan to assign to their subordinates in the future. The role of researchers would be to develop a form which would guarantee that observations are targeted and systematised and their results recorded. Only the analysis of the forms completed by team leaders trained for this purpose would make it possible to accurately characterise the level of IL of individual respondents.

One of the promising ideas for the shape of such research tools is the form used in the critical incident technique. It allows you to collect empirical data from the occurrence of the events covered by the study. It is used for identification and behavioural description of people's attitudes and behaviour in various circumstances, for example good and bad practices in the implementation of certain tasks or skills necessary for effective performance of a task. According to Cisek (2017), using information for professional purposes provides an example of such events. However, Cisek proposed a research technique in which empirical material is usually collected through individual interviews, surveys, essays written by respondents, observations (direct, participative), and group interviews. The author's experience, gained during the studies described in the article, leads to the acceptance of the thesis that in the reality of Polish offices such procedures can prove difficult to implement. First of all, it may be due to overly optimistic self-assessment of IL by the employees. An important barrier may also be a failure to notice the occurrence of critical events of negative nature. Therefore, the author is inclined to use all forms of the surveys examining IL in offices as a tool, actually created and eventually analysed by researchers, but on the other hand completed by team leaders of public officials.

6. Conclusions

The conducted research enabled us to determine that the problem of IL is treated marginally in Polish public administration offices. In principle, this type of information skills is not required in the recruitment process or in employee assessments. Employees need a relatively limited set of IT skills constituting IL.

Based on the opinions of the team leaders , the principles of work pragmatics (supervision over the quality of performed tasks, training in the case of problems) and the fact that the surveys have shown that a positive opinion on the level of individual elements of one's own IL positively correlates with the perception of the degree of professional usefulness of these elements of skills; it can also be assumed that the quality of the eight components of IL mentioned above most likely presents a good, satisfactory level in the studied offices. However, the methods and techniques available to the author prevented him from more precise determination of the level of these skills and the deficits occurring in this respect.

The abovementioned set of elements is not sufficient for implementation of the "good governance" principles described in the document “Good governance concept - reflections for discussion” (dealing with tasks through web applications, communication with the environment via the Internet, making visualised data and information available to the public, focus on effective tackling with untypical problems) (Ministerstwo Rozwoju Regionalnego, Departament Koordynacji Polityki Strukturalnej, 2008).

The concern that the members of staff employed in provincial offices are not ready to react efficiently in the situations requiring the use of untypical resources and tools or performing untypical operations on this information seems to be justified. They would not be able to deal with the need to apply alternative resources and tools if those used on a daily basis became unavailable or a breakdown occurred. Initial analysis of the websites of the offices in which the author conducted this research, looking at material created by office employees, leads to the conclusion that public administration officials are not prepared to formulate external messages which would take into consideration the principles of effective information flow in the times when the internet is becoming a dominant medium. They are also not ready to independently develop IL as new challenges arise. It is reasonable to put forward a thesis that the employees of the examined offices do not treat practices based on independent search and verification of necessary materials as "natural", necessary, or indispensable. Their professional activity does not appear as a factor supporting the

acceptance of modern, digital solutions and organisational practices. The information culture of the studied group is characterised by an optimistic perception of their skills and their professional usefulness, however, it remains at the stage of possessing only basic IT skills and using only familiar resources.

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Appendix

Appendix A: Survey 1

1.	**How often are you convinced that in professional environment you can effectively perform the following tasks:**	*I always can*	*most often I can*	*I usually can*	*I usually can't*	*most often I can't*	*I never can*
		% resp.	***% resp.***	***% resp.***	***% resp.***	***% resp.***	***% resp.***
1	find time to calmly reflect upon information retrieved from the infosphere	12,68%	33,99%	44,05%	6,01%	2,22%	1,05%
2	ensure information comfort by reducing the supply of unnecessary information	15,69%	37,78%	39,48%	5,23%	1,57%	0,26%
3	ensure information comfort by obtaining the amount of information needed in a given situation	17,52%	41,05%	36,86%	3,40%	1,05%	0,13%
4	locate basic and alternative sources of relevant information	23,27%	44,44%	30,46%	1,18%	0,52%	0,13%
5	eliminate redundant information using your own filtering and selection system	21,05%	42,35%	33,33%	2,35%	0,65%	0,26%
6	block access, avoid unwanted information (spam, advertisements)	25,36%	34,38%	31,11%	6,14%	2,48%	0,52%
7	share information with others, provide timely and reliable information, consistent with the needs of recipients	30,72%	43,01%	24,18%	1,57%	0,26%	0,26%
8	quickly select information, separate important information from unnecessary, redundant, false information	21,44%	45,49%	29,93%	2,48%	0,39%	0,26%
9	counteract information fatigue by consciously controlling information inflow (their quality and quantity)	14,90%	37,39%	40,65%	6,01%	0,78%	0,26%
10	systematically check and view information from your favorite sources	22,75%	38,69%	33,73%	3,92%	0,65%	0,26%
11	use information obtained and developed by other users of the infosphere (coworkers, friends, family)	21,05%	43,14%	32,68%	2,22%	0,92%	0,00%
12	recognize the manipulation techniques used by information senders	14,64%	39,22%	37,52%	6,93%	1,44%	0,26%
13	find time to organize and manage the collected information (creating useful structure and organization of information, labeling folders)	15,16%	33,46%	40,13%	9,80%	1,18%	0,26%
14	publish information with due care for the form (short, clear messages) - not cluttering the infosphere with low quality messages	18,82%	39,87%	35,95%	4,18%	0,78%	0,39%
15	synthesize information from many sources	16,34%	40,13%	37,25%	5,36%	0,65%	0,26%

Appendix B: Survey 2

2.	**How often are you convinced that in professional environment you can effectively perform the following tasks:**	*I always can*	*most often I can*	*I usually can*	*I usually can't*	*most often I can't*	*I never can*
		% resp.	***% resp.***	***% resp.***	***% resp.***	***% resp.***	***% resp.***
1	seek information to perform official duties	36,86%	46,01%	16,21%	0,65%	0,13%	0,13%
2	use the knowledge of other users of information needed at work	29,93%	48,10%	20,39%	1,18%	0,26%	0,13%
3	systematically browse blogs and forums connected with my professional interests	15,29%	29,67%	42,35%	8,76%	2,61%	1,31%
4	efficiently find information to find yourself in a given place and time in the easiest and cheapest way	23,92%	40,78%	31,37%	3,27%	0,26%	0,39%
5	use the instructions, e.g. software help systems, user manuals, expert advice, etc.	23,40%	40,26%	29,93%	5,10%	0,39%	0,92%
6	use catalogs of public and scientific libraries as well as databases with bibliographies and full texts of papers	23,66%	36,21%	33,73%	5,10%	0,78%	0,52%
7	efficiently manage your email account (reply quickly, delete unnecessary messages, categorize archived messages)	36,34%	34,25%	26,80%	2,09%	0,26%	0,26%
8	manage files stored on the computer (systematically delete unnecessary information, accurately label folders, take care of proper structure and organization of the used dataset)	32,68%	35,69%	27,45%	3,66%	0,13%	0,39%
9	prepare a compact, brief message on every topic	26,14%	40,78%	30,59%	1,83%	0,39%	0,26%
10	share information with others, convey information in many different ways (use messengers, text, email, chat)	31,76%	40,13%	24,71%	2,35%	0,78%	0,26%
11	send information to coworkers and friends according to their preferences (knowing their needs and preferences)	29,02%	41,83%	26,54%	1,70%	0,52%	0,39%
12	quickly select information and make the right decision	24,05%	46,27%	26,80%	2,35%	0,26%	0,26%
13	systematically, on an ongoing basis, select constantly incoming official information	28,10%	42,61%	26,80%	1,70%	0,39%	0,39%
14	systematically, regularly select constantly inflowing information from the country and the world	21,18%	41,18%	31,24%	4,71%	1,18%	0,52%

Appendix C: Survey 3

3.	**Assess, using a five-level school rating scale [from 1 (unsatisfactory) to 5 (very good)], the level of your own information competence in professional work.**	*1*	*2*	*3*	*4*	*5*
		% resp.	***% resp.***	***% resp.***	***% resp.***	***% resp.***
1	Using different types of search engines (e.g. general - Google, specialist for texts - Google Scholar, specialized for graphics - Picsearch), depending on your needs	4,44%	9,02%	20,92%	35,82%	29,80%
2	Knowledge of reliable websites with controlled information content, e.g. statistical, legal, economic, political	3,92%	7,32%	19,35%	42,09%	27,32%
3	Using bibliographic databases as well as general and subject area bibliographies to solve problems	4,18%	10,46%	27,45%	39,48%	18,43%
4	Designing and creating databases	10,33%	20,65%	35,16%	23,79%	10,07%
5	Creating information sets in Excel-type programs	4,31%	15,82%	26,80%	33,07%	20,00%
6	Presenting information in a visual form (graph, diagram, infographic)	6,01%	17,65%	28,10%	31,11%	17,12%
7	Creating information on a specific topic for public release	5,62%	11,24%	25,49%	39,87%	17,78%
8	Evaluating credibility of found information	3,14%	9,15%	19,87%	44,18%	23,66%
9	Assessing someone else's views and opinions by comparing them with the data and facts found on your own	4,05%	9,02%	21,44%	42,61%	22,88%
10	Recognizing hate speech and trolling	4,44%	8,37%	16,99%	38,43%	31,76%
11	Distinguishing between transmission of information and propagation of opinions and views	4,58%	7,71%	19,08%	40,13%	28,50%
12	Staying safe while using online information resources	4,31%	7,06%	16,73%	42,09%	29,80%
13	Conducting substantive discussions on social media, supported by data and facts	7,19%	10,85%	27,32%	35,03%	19,61%

Appendix D: Survey 4

4.	**Assess, using a five-level school rating scale [from 1 (unsatisfactory) to 5 (very good)], the usefulness of specific information literacy in professional work.**	*1*	*2*	*3*	*4*	*5*
		% resp.	***% resp.***	***% resp.***	***% resp.***	***% resp.***
1	Using different types of search engines (e.g. general - Google, specialist for texts - Google Scholar, specialized for graphics - Picsearch) depending on your needs	4,18%	8,89%	20,52%	34,12%	32,29%
2	Knowledge of reliable websites with controlled information content, such as: statistical, legal, economic, political	3,40%	7,19%	19,35%	39,08%	30,98%
3	Using bibliographic databases as well as general and subject area bibliographies to solve problems	5,75%	11,63%	26,01%	36,08%	20,52%
4	Designing and creating databases	9,93%	15,16%	34,51%	25,49%	14,90%
5	Creating information sets in Excel-type programs	4,58%	13,07%	24,44%	32,42%	25,49%
6	Presenting information in a visual form (chart, diagram, infographic)	7,19%	15,56%	28,37%	30,85%	18,04%
7	Creating information on a specific topic for public release	4,84%	10,20%	23,27%	38,04%	23,66%
8	Assessing credibility of found information	3,92%	6,14%	16,21%	42,61%	31,11%
9	Assessing someone else's views and opinions by comparing them with the data and facts found on your own	4,31%	8,89%	19,74%	41,44%	25,62%
10	Recognizing hate speech and trolling	6,54%	10,59%	21,70%	32,81%	28,37%
11	Distinguishing between transmission of information and propagation of opinions and views	4,97%	7,32%	22,09%	38,04%	27,58%
12	Staying safe while using online information resources	3,40%	6,27%	16,60%	37,78%	35,95%
13	Conducting substantive discussions on social media, supported by data and facts	9,54%	12,81%	24,05%	32,81%	20,78%