



The CoP's Role in Introducing New Technology in Cultural Organizations

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Abstract

This study assessed the problem of the development of new technology and knowledge management in cultural organizations. The specific role of the community of practice (CoP) as an instrument of change management and knowledge generation in cultural organizations was considered. In terms of the study problem, qualitative research methods were used for the analysis of the academic literature and practical cases of libraries in Florida. The outcomes of the study demonstrated that the CoP did not play a negative role in the process of new technology integration in cultural organizations. In contrast, CoPs played a serious positive role thus generating ideas for innovations and supporting the personnel of libraries in their development. Concerning sources of barriers, the lack of resources, limited capabilities of librarians, and low support of management were considered the main issues. Further research should identify specific recommendations applicable for the improvement of the situation and sharing of the best experience in the sphere of digital transformation of cultural organizations.

Keywords: cultural organization, a community of practice, knowledge management, new technology

1. Introduction

The development of modern society is associated with the effective generation, accumulation, and utilization of knowledge. Phillips et al. [41] analyzed the question of the evolution of knowledge society as a social phenomenon since its emergence in the nineteenth century. One of the main characteristics of such a model of modern society is that knowledge becomes one of the most valuable and useful resources, and society considers the development and sharing of knowledge as one of the main priorities for its performance.

A specific role in the development and management of knowledge throughout the history of humankind has been played by cultural organizations. In the context of this study, specific objects of research included libraries as institutions of knowledge accumulation, development, and sharing. Kim et al. [31] argued that libraries obtained a strong competitive advantage for knowledge management due to capabilities of effective application of knowledge and information. To support this idea, [1] stated that libraries serve as a unique system and environment for the creation, sharing, and analysis of knowledge. Libraries serve the objective of knowledge management for effective decision-making and problem-solving.

For the aims of this study, the researcher considered the problem of the evolution of knowledge management practices in the environment of libraries from the perspective of the influence of communities of practice. A community of practice (CoP) is considered a social group established with the key objective of effective knowledge management [25]. The CoP is associated with the effective accumulation and distribution of knowledge among members thus allowing newcomers to share useful knowledge without excessive loss of time for knowledge

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mastering [20]. The study of the interaction between members of the CoP should contribute to a better understanding of the existing formats of knowledge sharing and development in cultural organizations.

Traditionally, CoP as an institute is considered useful for knowledge management in libraries. CoP allowed librarians to better serve the objectives of visitors seeking knowledge [42]. Nevertheless, discussion of the role of CoPs in the aspect of new technology integration in public libraries demonstrated that the professional communities could generate serious barriers to innovative transformation of knowledge management practice. Factors of resistance to the integration of innovative technology into cultural organizations among CoPs include the lack of financial resources [21], the fear of loss of a social role of librarians due to integration of new technology, and the factor of technostress [17]. Altogether, CoPs in modern public libraries usually demonstrate significant resistance to the integration of new technology into the sphere of knowledge management.

The main problem in this study was associated with the phenomenon of resistance to the integration of new knowledge management technology among CoPs in public libraries. It was important to study the factors that contributed to the observed resistance and did not allow engaged stakeholders to integrate the full range of opportunities associated with the new knowledge management technology effectively. Based on the analysis of specific parameters of stress and resistance, it might be possible to offer innovative solutions aimed at supporting the integration of technological innovations into public libraries. The study should contribute to the improved understanding of the existing situation in the sphere of knowledge management practices realization among CoPs in public libraries.

The purpose of this study was to identify the roles of different factors in the creation of barriers to the effective integration of new technology into libraries. Specific roles of CoPs, including the personnel of libraries was considered. It was important to identify the solutions that could contribute to the improved integration of innovative technology into cultural organizations as a means of developing knowledge management practices. The focus on librarians as members of libraries' CoPs and the key subject of the study was explained by the leading role played by this type of stakeholders in the performance of modern libraries. Librarians are responsible for determining the format of knowledge development, accumulation, and sharing in this type of cultural organization. Consequently, it is necessary to understand their perception of the role of new technology in the process of knowledge management. The purpose of the study of means of new technology integration for knowledge management in libraries was justified due to the obvious change in the demands of visitors seeking knowledge and information in libraries. Pyrko et al. [42] argued that young users were interested in the utilization of innovative information and communication technology (ICT) for the accumulation and application of knowledge and information. From this perspective, reliance on traditional methods of knowledge management practised by conservative librarians could remove the youth from this type of cultural organization. In the context of the study, it was important to define specific strategic moves that might allow librarians and knowledge management organizations to create conditions for the productive attraction of different categories of visitors, including the youth. The significance of this study is explained by two key factors – the importance of efficient knowledge management in modern society, and existing difficulties in the organization of knowledge management processes in modern libraries. The question of the significant role of knowledge management in modern society was considered in a high number of relevant academic sources. Mohajan et al. [40] highlighted the leading role of effective knowledge management practices in the following fields of human activity: “education, cognitive science, health, sociology, management science, information science, computer science, information and technology, economics, philosophy, psychology, knowledge engineering, artificial intelligence and all branches of business.” Knowledge management can be considered one of the main sources of competitive advantages for any type of organization. Bolisani and Bratianu (2018) identified knowledge management as a basis of the new knowledge economy model, where intangible resources became more valuable and expensive for organizations as compared to tangible materials and resources. From this perspective, any type of cultural organization should be interested in the definition of ways to increase the efficiency of knowledge management in its operations. Such an outcome would serve both as a source of additional benefits for stakeholders of cultural organizations, and a source of competitive advantages for the organization itself. The second argument for the significance of the study problem is the worsening statistics of library visits in the US and other countries worldwide. According to [4], from 2012 to 2019, the annual decline in the total number of visits to libraries in the US was equal to approximately 3% every year. This fact means that for a long period, libraries have been losing popularity in the country, even despite their high availability. According to the statistics of the Institute of Museum and Library Services [28], currently, more than 311 million Americans have direct access to libraries, while less

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than 50% of citizens visit libraries on a regular basis. In 2015, nearly 107 million visitors in the US attended regular knowledge-sharing programs arranged by local libraries [28]. As one can see, modern libraries face obvious issues of attraction and retention of visitors, especially younger generations of visitors. From this perspective, it is important to discuss the utility of new technology integration for knowledge management and the attraction of visitors.

The main aim of the study was the following: To identify the influence of CoPs on the practice of realization of new knowledge management technology in modern cultural organizations.

For the defined aim of the study, the following research objectives were set:

- To determine the scientific interpretation of the main terms used in this paper.

In the context of the study, it was important to provide a scientific interpretation of the major terms utilized in the paper. The following terms were considered: *community practice, knowledge, knowledge management, new technology, business, and cultural organization*.

- To identify factors influencing the resistance to change among librarians and other CoP members in terms of using new knowledge management technology.

If the main hypothesis of the study was supported based on the empirical data and outcomes of previous academic studies, it would be important to generate knowledge about the main factors that identified resistance to the integration of new knowledge management technology into CoPs of cultural organizations. Positions of different stakeholders had to be considered, mainly targeting the motivation of librarians.

- To provide recommendations that could be offered to members of CoPs in libraries to integrate innovative knowledge management technology effectively.

The outcomes of the analysis of the main factors that could generate resistance to the integration of new knowledge management technology into CoPs of cultural organizations had to contribute to the definition of future recommendations. It was important to determine practices and methods that could change the perception of new technology in the sphere of knowledge management among stakeholders of the CoP in cultural organizations. The outcomes of this study had to serve as a basis for the further study of the means of practical integration of new technology into cultural organizations with the support of CoPs.

2. Literature Review

The first question addressed in the literature review was related to the definition of the main terms of the paper. Definition of the terms served the objective of clarification of the study borders. The following terms were considered vital for the study problem: *a community of practice, knowledge, knowledge management, business, and cultural organization*. For each of these terms, the perspectives of different researchers were analyzed.

Community of Practice (CoP). The first term considered in the literature review was a *community of practice*. Community of practice is a form of social organization that is considered to play the leading role in the process of knowledge management. Bolisani et al. [12] identified a CoP as the basic element of the social learning system, in which generation and spread of knowledge are performed through socialization (p.3). The authors also highlighted the key characteristics of the CoP, which included mutual engagement, joint enterprise, and shared repertoire [12]. In general, CoP can be identified as a form of social construction, which serves as a self-organizing environment with an individual-based setting [13]. All these characteristics make CoP an important basic element for the organization of the knowledge management process in the organization.

Mercieca et al. [39] analyzed the role of CoP from the perspective of the social dimension of learning. Mercieca et al. [39] analyzed social learning theory and stated that the process of learning takes place not only as an internal cognitive process but also as a process in the context of social learning situations. Individuals and their environment should not be considered distinct but as those supporting each other in the “spiral process of growth” [39]. Social interaction experience impacts the psychological processes development in a person thus leading to the accumulation of new knowledge and skills. Altogether, CoP can be considered a unique social environment supporting the development of individuals.

The final definition of CoP was given in the study by [47]. Authors identified CoP as a “learning partnership among people who find it useful to learn from and with each other about a particular domain. They use each other’s experience of practice as a learning resource” [47]. Altogether, CoP unites people that are interested in the development of knowledge and consider cooperation an optimal format of knowledge generation. Their main objective for cooperation is knowledge management.

Knowledge. The general definition of knowledge provided by [10] included the following: “justified true belief” (p.5). From this perspective, the main characteristics of knowledge identified by the authors included truth conditions, belief, and justification conditions (Bolisani & Bratianu, 2018, p.5). The truth condition determines the confidence of a person in their statement and the difference between knowledge and opinion. To consider a statement as true, a person should obtain a method of justification of truth and obtain a belief that their statement is true. Bolisani et al. [10] also identified three types of knowledge generally existing: experiential knowledge, skills, and knowledge. Experiential knowledge includes information collected directly from the environment [11]. Skills mean knowledge about means of how to complete a specific task [11]. Knowledge is defined as information people generally know.

Haradhan et al. [24] determined knowledge as any type of organized information that serves as a basis for actions and changing of the surrounding environment. From this perspective, knowledge is a result of information transformation that is related to the creation of new meaning and the development of a basis for real-life transformation. While the information itself might not be considered a source of practical changes in the world, knowledge is a realistic basis for a transformation of the surrounding environment through its improved understanding. Haradhan et al. [24] divided knowledge into two main types: tacit knowledge and explicit knowledge. Tacit knowledge includes best practices and hands-on skills – individual knowledge, which cannot be transferred to others [24]. In turn, explicit knowledge includes information that can be properly codified and transmitted [24]. Altogether, one of the main characteristics of knowledge is its ability to be transmitted.

In quite a similar way, Boshoff et al. [13] distinguished factual and procedural knowledge – the knowledge of know-what and know-how. The factual knowledge includes information about the environment and facts that cannot be used in practice but serves as an important element of the person’s worldview [13]. In contrast, procedural knowledge determines information about the tools and methods of specific practical tasks implementation. From this

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perspective, the two-fold nature of knowledge is determined; knowledge is a summary of facts about the environment and the skills that allow individuals to transform this environment.

The final vision of the continuum nature of knowledge was provided in the study by [50]. In this study, the researcher highlighted the difference between general awareness and deep knowledge about the object or event. From the perspective of [50], the level of knowledge about the specific object could vary from general awareness, which could rarely serve as a source of efficient decision-making and deep knowledge required for an individual to be considered a specialist in a specific sphere. Altogether, discussion of different dimensions of knowledge demonstrates the complex nature of the phenomenon.

Knowledge management. The discussion of the complex nature of knowledge makes it important to analyze the *knowledge management* process. Apurva et al. [6] determined knowledge management as “the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use, and exploitation” (p.932). The knowledge management concept requires the transformation of the individual knowledge of an employee into group knowledge that is effectively transmitted within the organization. One of the main objectives of knowledge management is related to the effective distribution of knowledge and information between individuals inside the group. To create conditions for the effective generation of new knowledge, it should be effectively distributed among individuals. Apurva et al. [6] determined the following sequence of activities that form the nature of knowledge management: knowledge capture and creation - knowledge organization and retention – knowledge dissemination – knowledge utilization (p.935). Lin et al. [36] determined knowledge management as an interconnection of the following activities: knowledge creation, knowledge storage, knowledge transfer, and knowledge application. Lin et al. [36] highlighted the fact that neither of these activities should be considered a separate type of knowledge management process. Instead, they should all be implemented in the interrelated format thus serving the similar objective of knowledge generation and maximization. Neither of these elements of knowledge management could guarantee sufficient results for the organization without the implementation of other steps.

Kumar et al. [33] presented an important list of factors that could serve as barriers to effective knowledge management. Discussion of these parameters is important from the perspective of this problem. Following barriers to effective knowledge management were determined: organizational barriers, cultural; technological, the lack of management support, personnel barriers, the lack of knowledge management framework, environmental barriers, internal and external factors, and the lack of motives and expertise in knowledge management [33]. All these factors can be considered potentially contributing to the reduction of knowledge management utility in cultural organizations. It will be important to assess their influence on the performance of librarians in the CoPs.

Business. *Business* can be determined as any type of organization engaged in industrial, commercial, or professional activity [23]. Businesses could be run in one of two strategic formats: either for-profit or non-profit. The business could also be determined as an organized activity targeting sales of goods or services for the aims of generating profits. Business organizations vary in the scale of operations, ranging from a sole proprietorship to multinational corporations [23]. Business organizations select different strategic objectives and missions for running their operations.

Cultural Organization. The cultural organization is identified as “an eligible organization with culture, the sciences or humanities as its primary mission and purpose. The organization must operate as a cultural organization, including but not limited to a cultural center, civic arts-presenting venue, botanical center, science museum, children’s museum, arboretum, or zoo” [35]. In this way, the cultural organization is characterized by specific, non-profit objectives of operations, and the focus on the preservation of cultural heritage as one of the strategic priorities of performance.

Role of Communities of Practice within Libraries

The following question in the literature review was related to the theoretical analysis of the effects of CoPs on the performance of different types of organizations, including cultural organizations and libraries. Before the concentration on the interests of libraries, it is important to consider the role of CoP for knowledge management in business. Aljuwaiber et al. [2] determined the following advantages of CoPs operations in business organizations

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from the perspective of knowledge management: reduction of time for sharing of new knowledge, enhanced problem-solving in knowledge management, increased levels of trust and confidence among organization's members that lead to higher motivation for knowledge sharing (p.736). Altogether, it is clear that the focus on the social format of CoP allows any type of organization to increase the level of members' motivation for knowledge sharing and generation.

In terms of libraries' performance, the implementation of CoPs was also found to be associated with the specific advantages for their members. CoPs are responsible for the organization of professional conferences and workshops, which allow librarians and other stakeholders to improve their professional competency [31]. The personnel of libraries managed to avoid isolation and developed their social skills in cooperation with the CoP's members [31]. From the perspective of implications for visitors of libraries, integration of CoPs was found to be related to the development of new forms of engagement and activity for visitors thus leading to higher motivation for them to visit the library often, and increasing the overall level of utility generated by a librarian for a single visitor [26]. In terms of public libraries' development through CoPs, it was argued that such a format of community organization led to improved cultural communication and development of the overall cultural level of community members [31]. Finally, it was argued that the development of CoPs in specialized libraries (including libraries in healthcare facilities) could significantly improve the performance of organizations in general thus leading to higher productivity of personnel [31]. As one can see, the integration of the CoP as a format of community activity in libraries is a promising innovation.

Another study by [34] considered the role of CoP as an instrument of the social transformation of librarians' performance. In the process of the case study, an experiment was performed to determine the influence of the CoP format on changes in the performance and self-perception of librarians. The findings of the study highlighted the following changes in the format of librarians' performance: improved skills of community building, personal growth outcomes, leadership and organization skill development, and implementation of supporting tools at work [34]. Altogether, it was argued that the CoP as a social format contributed to the self-perfection of librarians' performance.

The study by [9] also highlighted the role of CoPs as an instrument of transformation and education of librarians. In this study, the group of young students who would like to become librarians in the future was supported in their education using tools of CoPs. In the conditions of a library school, students gained a unique experience of social studying, where a significant part of useful knowledge came not from the educators or lectures but from other members of their professional community of students. Participants of the study argued that the format of CoP in their performance allowed them to determine new sources of knowledge for development and problem solving [9]. In addition, it was determined that the format of CoP could improve the quality of cooperation between educators and students, which was usually a problem in terms of higher education [15]. Such outcome demonstrated that the development of the CoPs format of community performance was vital for any type of organization.

The discussion of the role of CoP as a social cooperation format in libraries demonstrated its significant utility for a range of stakeholders, mainly including librarians and visitors of libraries. From this perspective, the integration of the CoP format is a promising strategy that should be utilized for the development of cultural organizations. Nevertheless, it is also important to consider the role of factors that contribute to the development of barriers to the integration of new technology into libraries that are caused by the performance of CoPs. Resolution of this issue can significantly improve the quality and outcomes of CoP performance in cultural organizations.

1.1 Theories of Knowledge Management

The following question addressed in this study included the discussion of the existing theories of knowledge management. These theories could be applied to describe the process of knowledge creation and management in modern organizations. Discussion of the main theories in terms of knowledge management could contribute to the understanding of the mechanism of CoP influence on knowledge management processes in cultural organizations.

The leading theory that describes the knowledge management process is Nonaka's SECI model or Dynamic Theory of Organizational Knowledge Creation. In his theory of organizational knowledge creation, Nonaka determined the principles of knowledge conversion, stating that the basis for the development of knowledge is its socialization,

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namely discussion and sharing of knowledge [32]. In the process of discussing existing knowledge, individuals share opinions about new ideas and generate a new level of knowledge. The SECI model considers the process of knowledge generation as dynamic and endless, where continuous dialog between the explicit and tacit knowledge generates a new type of knowledge and distributes it between different ontological levels: individual, organizational, and inter-organizational [19]. Understanding differences between explicit and tacit knowledge demonstrated the role of the community of practice in knowledge generation. Communities that consider similar ideas and theories serve for the development of explicit knowledge, which was transformed into tacit knowledge via the knowledge spiral.

A study by Gourlay [22] presented a grounded criticism of the SECI model, which demonstrated quite contradictory nature of the theory itself. Three key arguments against the theory were determined. First, the outcomes of the study by Nonaka discussed the mechanism of semantic information development, which was not equivalent to knowledge. From this perspective, Gourlay et al. [22] argued that the SECI theory could be considered a mechanism describing the process of semantic information development, which did not correlate with the potential mechanism of knowledge creation (p.7). The second limitation of the SECI model described by [12] included the low validation capabilities of the survey performed by Nonaka. In his study, Nonaka used a survey mechanism to justify the SECI model. This survey justified the relevance of just two modes out of four in the model. The final limitation of the study was that the modes of combination and internalization in the SECI model were not properly described [22]. Altogether, the findings of the study revealed serious limitations of this knowledge management theory.

Another study by [37] discussed the main elements of knowledge management theory in inter-organizational collaboration. This theory aimed to define what factors influenced the decision of organizations to enter collaboration on the aspect of knowledge management. The following factors were highlighted: need, power, stability, cost, legitimacy, and goals [37]. Analysis of this theory demonstrated what parameters could be considered in the process of deciding about entering a knowledge management relationship.

The study by [38] considered different theoretical concepts that could be applied to describe the process of knowledge management. In the context of this study, it was interesting to concentrate on the task-technology fit model. It described the process of knowledge management as dependent on the character of tasks faced by the organization or team of researchers. The following factors were considered to influence the knowledge management process: task characteristics, technology functionality, fit between technology and task, and the model of technology utilization to solve the task [38]. Altogether, analysis of the specifics of tasks faced by an organization could influence the planning and implementation of the knowledge management process.

The final theoretical concept that should be considered was presented by [8]. This study defined the influence of CoP on the process of knowledge management. According to the scheme of balance between knowledge access and knowledge exchange, a CoP serves for the contribution of new knowledge to the organization, while its performance depends on placing new knowledge in the context of the CoP performance [8]. Altogether, different theoretical concepts could be used to characterize the mechanism of knowledge management in modern organizations.

1.2 Factors of Resistance to New Technologies in Libraries

The final question addressed in the literature review related to the analysis of the factors that impact the generation of barriers to implementation of new technologies in libraries. The discussion of this question should highlight the main factors that should be considered during the qualitative study in this paper and form the list of parameters for analysis. It will be important to compare the findings of prior studies with the results of this research.

The first study analyzed in this section was the publication by [48]. This study assessed the specifics of new technology implementation in libraries of Poland. The outcomes of the study included a definition of the following categories of information barrier types: barriers connected to personal characteristics of visitors and librarians, interpersonal barriers, environmental barriers, and barriers related to informational resources characteristics [48]. Among the most interesting types of barriers to information sharing in libraries, the following should be mentioned: passive attitude and the lack of readiness, the lack of help and support from other people, financial, cultural, legal, and political barriers, and the lack of information materials, as well as technical problems and high costs of new technology. Taken together, it was argued that the improper preparation of personnel and resource constraints played key roles in problems with new technology in libraries.

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Another study by [46] assessed the role of specific factors causing barriers to the use of new technologies in libraries in Pakistan. The outcomes of the study performed among professional librarians in different universities of Pakistan demonstrated the role of the following factors: the lack of budget for IT resources, inadequate IT infrastructure, the lack of administrative support, the lack of innovative attitude of librarians, the lack of dynamic role of communities in libraries, the lack of innovative leadership among librarians, improper planning and absence of technical policy, and the lack of training and absence of technical support [46]. It is interesting to highlight the fact that one of the main barriers identified by the respondents included the absence of proper support of community existing inside libraries. From this perspective, even if the CoPs were established in the specific libraries, they did not demonstrate utility in the transformation of IT solutions for libraries. These findings support the main hypothesis of the study, though additional analysis is still required.

Al-Fadhli et al. [5] analyzed the role of factors that created barriers to the application of new technologies in libraries in Kuwait. This study highlighted the role of the following factors in the promotion of new technology inside libraries of Kuwait: availability of financial resources, the lack of interest in positions of ordinary librarians in the process of digital transformation, the desire to earn prestige through digitalization, the shortage of trained professional staff for integration of new technologies, and the high level of support of new technologies among librarians [5]. An important finding of this study was that it demonstrated the opportunity for the promotion of high support for new technology among librarians. Due to the high overall level of motivation for the use of new technologies in society of Kuwait, librarians were also motivated to invest in new digital solutions. Nevertheless, the low level of overall engagement of librarians and the absence of skilled professionals in new technology in libraries led to failures in this process.

The study by [51] compared the factors that influenced the integration of new technology into libraries of Belgium and South Africa. According to the study findings, internal and external barriers played key roles in resistance to new technology integration for each of these countries. Specific barriers included the lack of financial resources and managerial support for the integration of new technology [30]. Nevertheless, it was also argued that the rising number of professional librarians shows high support for new technology, and it is a positive trend.

Another study by [29] provided one of the most detailed models applicable for a description of factors that served as barriers to the integration of new technology into libraries. A wide list of barriers was considered in this paper, and each of them should be assessed from the perspective of its applicability to the target population of this paper. The following barriers were mainly highlighted in the aspect of new technology integration among librarians: the lack of time, exclusion of librarians from leadership roles, the lack of funding, inadequate staffing, the climate of competition in the workplace, technology resources, fixed schedule, the lack of role definition and absence of managerial support, the lack of professional development and expertise, feeling of frustration and absence of work-family balance, and personal health [29]. Altogether, it is clear that professional librarians could face a significant range of problems and barriers that might not allow them to contribute to the integration of new technology into the workplace.

Taken together, the findings of the literature review determined the main types of resistance factors that should be estimated. In a further study, it is important to define whether each of the stated factors plays a role in the creation of barriers to the productive integration of new technology into cultural organizations. Specific factors for librarians and CoPs, in general, should be estimated.

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3. Methodology

3.1 Research Philosophy

This section of the paper presented information about the research methodology applied to address the key research questions and objectives. The primary step in the definition of the research methodology is associated with the selection of the research philosophy. Selection of the specific research philosophy should demonstrate what approach in the description of reality and the object of the study were implemented by the researcher. Research philosophy is the general approach that describes the ontological, epistemological, axiological, and methodological nature of the study [45]. The character of the study supposed collection and analysis of primary data from the representatives of the CoP in cultural organizations. From this perspective, it was important to focus on the research philosophy that aims to present the reality under study as a result of the interpretation of subjective beliefs and opinions of individual respondents.

The optimal research philosophy selected for this study was the interpretivism research philosophy. The nature of reality as it is interpreted in such philosophy is rich and complex, with multiple meanings that are socially constructed. Reality itself is a mixture of personal experiences, processes, and practices [45]. The acceptable knowledge in this research philosophy includes narratives, personal stories, perceptions, and individual experiences. It is important to collect knowledge in the form of respondents' perceptions of the object under study. It is also crucial to highlight the significant role of the researcher's subjectivity in the interpretation of the study outcomes [45]. Among the research methods applicable to the interpretivism research philosophy, the following methods are most usually used: inductive research, including a small sample of participants, qualitative methods of data collection, and analysis [44]. The choice of the specific research philosophy determined the focus of the specific research design.

3.2 Research Design

From the perspective of the interpretivism research philosophy, the qualitative research design was selected for the aims of the paper. Qualitative research is characterized by focusing on the small sample of participants and collection of data that is mainly qualitatively unformalized [16]. This methodology of the study is optimal for the study of the problem of CoP effects on new technology integration into cultural organizations. The specifics of the problem define low opportunities for the application of quantitative research methods. The novelty of the research problem makes it difficult to determine the character of data that should be quantified to address selected research questions. At the same time, a significant knowledge gap in the field of study makes it difficult to identify the variables of the study that could be assessed for a large sample of participants. In the current stage of the study, it is important to perform a deep study of a small sample of representative participants to define the main parameters of the research problem. In the future, it would be possible to develop a quantitative study to analyze the generalization opportunities of the current study findings.

In the context of this study, the qualitative research design was also considered a basic methodology for the analysis and study of information from reliable and relevant academic literature sources. For the aims of resolution of specific study questions, valuable data could be found only in academic literature sources. To generate useful knowledge for the aims of achieving study objectives, a document analysis approach was utilized [14]. It is an example of the qualitative research design utilization during the study.

3.3 Study Sample

Due to the focus on the qualitative research design methodology, the researcher collected and analyzed data from a small sample of respondents. The description of the study sample should be divided into two main categories of data sources: academic literature and representations of librarians' community. In the process of qualitative document analysis, the researcher focused on the collection and analysis of data from the relevant and reliable academic literature. For the aims of the study, 48 literature sources were used. A final number was identified based on the selection procedure applied to the larger sample size. The following criteria were utilized to select the optimal literature sources: high relevance of the main theme of the literature source to the theme of the paper, high reliability of the literature source (the paper had to be published within the last ten years before 2021), high reliability of the

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database or journal where the paper was published. Based on these criteria, several steps of sample sources selection were made leading to the definition of the final sample size of 48 literature sources.

For the aims of the primary data collection and analysis, the researcher focused on the attraction of respondents from representatives of the librarian community. In this study, the researcher mainly selected candidates working at libraries of Florida. Participants of the study had to be members of the Florida Library Association. This condition allowed the researcher to target respondents with a sufficient level of experience of working in the sphere of librarian practice and proper understanding of specific situations existing in the professional field of librarians in Florida. Prioritization of alternative sources of primary data could lead to the accumulation of data that would lack reliability and generalization opportunities due to the limited experience of respondents.

The total sample size utilized for the collection of primary qualitative data included five representatives of the community of professional librarians. Such a sample size was selected due to the limited capabilities for data collection and analysis available to the researcher. It was supposed that the current findings of the study would allow the scholar to develop initial insights for the study problem, which would be further analyzed based on a larger sample size.

3.4 Instruments and Materials

The first category of instruments applied during the study included databases and Internet search engines used for a selection of academic literature sources. In the process of the study, the researcher focused on reliable academic literature databases and Internet search engines. The search and selection of the academic literature sources were performed based on the use of specific keywords that had to be mentioned in the title, abstract, and main body of the article. The following keywords were mainly applied during the search procedure: “knowledge management,” “cultural organizations,” “information and communication technologies,” “library,” and “resistance to change.”

Due to the specifics of research methodology, the researcher paid more attention to the development of the instruments and materials used for the collection of primary qualitative data. To gather this information from representatives of communities of professional librarians, the instrument of interview questionnaire was utilized. The researcher developed an interview questionnaire, which included the basic questions asked to the respondents during interviews. A summary of the interview questions is presented in Appendix 1. The development of the single questionnaire allowed the researcher to formalize and structure the interviewing process while avoiding mistakes and delays during the interview process. The format of structured interviews allowed the researcher to address the main study questions. The format of the interview was identified based on findings of the literature review and definition of specific knowledge gaps that had to be filled in during the study.

An additional method of data collection and analysis used in the research included the case study. This method was utilized to gain an improved understanding of the specific most interesting cases in the selected field of study. The advantages of the case study methodology include opportunities for improved concentration on the study of specific elements of the research object (Montes-Rodriguez et al., 2019), analysis of the real-life environment and experience of numerous stakeholders engaged in the study process [3, 7]. Based on the application of the case study methodology, it is possible to analyze the positions of different actors operating in the single environment as compared to the analysis of a single actor’s position common in the interview analysis format [18,43]. From this perspective, the case study method was selected to overcome the potential limitations of the interview analysis format, where the focus on the single position of the actor could cause misunderstanding of the actual processes that took place in the target organization.

3.5 The Procedure of Data Collection

The procedure of data collection for the aims of the study included two different approaches, specific for each type of data being analyzed. For the aims of collection of secondary qualitative data in the context of literature review, the researcher applied a step-by-step format of literature sources selection for the final sample. In the initial phase of data collection, the researcher selected 126 academic literature sources from different data sources based on the identified criteria of the sample. In the first phase of selection, the date of publication and title of the literature source was assessed.

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In the second phase of literature sources selection, the researcher analyzed both the title and the abstract of literature sources. Removal of sources that did not present an abstract correlating with the objectives of the study led to the reduction of the overall study sample to 72 sources. In the final phase of data sources selection, the researcher performed a detailed literature review of the final sample of the sources. Removal of the papers that did not deliver a sufficient level of knowledge and utility for the study objectives led to the reduction of the final sample size to just 48 literature sources.

The procedure of data collection for primary qualitative data during interviews included initial selection and attraction of candidates. To select the optimal candidates for the study, the researcher applied an online search mechanism. LinkedIn social media resource was applied to select the target population with optimal personal and professional characteristics for the aims of the study. Using the search engine of social media platform, the researcher selected candidates with sufficient level of work experience in the sphere of librarian practice, who were also members of the Florida Library Association. Using the instrument of personal messages on LinkedIn, email, and other official contacts of the respondents, a researcher delivered them an invitation letter and consent form informing them about the objectives of the study and their potential role in it. Each respondent was invited to take part in the study and sign the consent form to show their agreement with the terms of the study.

Following the definition of a sufficient sample of respondents, the procedure of online data collection was performed. Each respondent was contacted to identify the optimal terms of the online interview arrangement. They were asked to select time and platform for communication – mainly Skype or Zoom. Each interview lasted approximately 20-30 minutes. A researcher asked for respondents' agreement on recording the interview. Three formats of recording were supposed: written transcript, audio, and video recording. The researcher was interested in the format of video recording as optimal from the point of further data analysis. Nevertheless, the final decision depended on the preferences of respondents.

For the data collection, the researcher selected the specific organization that was found to be the most interesting for the study based on the outcomes of the analysis of interviews. From this perspective, the researcher was expected to analyze the organization that would demonstrate the best outcomes of the CoPs' resources used for the aims of new technology development in the library. The target organization had to demonstrate a high level of new technology integration, together with the proper effectiveness of the CoPs resources application. The data collection procedure would start by negotiating with all the potentially engaged parties to receive their permission for observation of ordinary performance processes and making notes that would form the basis for further study. In the process of data collection for the aims of the case study, the researcher aimed to analyze the widest range of organizational performance' aspects, including the relationship between the key categories of stakeholders, as well as formats of cooperation and communication between them.

3.6 Methods of Data Analysis

The methodology of data analysis applied for both primary and secondary qualitative data included the instrument of thematic analysis. In the context of thematic analysis, the researcher initially collected the text required for the aims of analysis – text of academic literature sources and transcript of interviews. Second, the coding process was performed to identify the main themes highlighted in the collected text. Based on an analysis of similarities and differences between the themes presented in different data sources, the key themes of the study were highlighted. Summarization of the findings of thematic analysis for all sources of data led to the formation of the key findings of the study.

Specific instruments of analysis were used for the aims of case study method analysis. In the study of the qualitative data collected during the case study, the researcher relied on notes-taking methodology and thematic analysis that would allow the scholar to identify the key themes that characterized the format of cooperation between stakeholders of the organization. Initially, the data about the format of cooperation between the key stakeholders would be collected in the form of formal notes. For example, the researcher would describe the experience of observing the cooperation between managers and librarians in the process of consideration of opportunities for the integration of new technology. Key ideas and arguments collected from this observation would be noted, and thematic analysis of the collected data would form the basis for the definition of main themes. As a result, it is expected that the outcomes of the case study will allow the researcher to identify specific characteristics of the

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format of cooperation, which allowed engaged parties to achieve high productivity in terms of new technology integration, especially from the perspective of the influence produced by CoP members.

3.7 Ethical Considerations

Due to the need to collect primary data from human participants, this study faced specific ethical considerations and obligations. From the point of organization of the study process, it was important for the researcher to avoid the situation of intended or unintended harm causing to the respondents of the study. The range of potential harm included direct physical harm or damage caused to the person's identity or dignity. To avoid the negative influence on the physical health of the respondents, the researcher asked them to select optimal conditions for the arrangement of the online interview. Respondents could choose the time and place they found optimal from the point of health and wellbeing outcomes.

To avoid the potential damage caused to the identity and dignity of respondents, the researcher arranged the data collection and analysis process in the format to avoid mentioning, applying, and publication of any type of personal data about the respondents. Neither of the respondents was asked to provide his/her personal information during or after the interview. At the same time, the researcher guaranteed no risk of collection or publication of personal information about the respondents during or after the study.

Finally, to avoid any type of negative influence on the respondents, each respondent was provided with the opportunity to abandon the study at any stage. In such a way, if a respondent experienced personal risk due to participation in the study, he/she could end participation at any moment, informing the researcher about his/her intention. All the personal data collected by the moment of the intended ending of participation would be eliminated. The respondents were not asked to explain the causes of their decision about avoiding participation in the researcher.

3.8 Limitations of Methodology

The specifics of the applied research methodology determined specific limitations that should be considered. The first important limitation of the study included selection bias. This type of limitation is related to the risk of selection of improper character of the sample population, leading to the generation of unreliable and unrealistic outcomes of the study [27]. In this study, the selection bias was associated with the overall small sample size and focus on the purposive sampling mechanism in the selection of candidates. The researcher relied on the purposive sampling method, since non-purposive sampling could not guarantee the high reliability of the sample for such a small sample size. As a result, the researcher had to focus on subjective criteria for the selection of candidates among professional librarians. Due to the limited scope of knowledge about the research problem, it was impossible to guarantee the selection of optimal criteria for the sample.

The second limitation of the study included subjective bias. This type of limitation is related to the risk of the excessive influence of the researcher's subjective opinion on the outcomes of the study [49]. Due to the specifics of the interpretivism research philosophy, the issue of subjective bias was initially integrated into the study. The researcher's subjectivity could impact the study outcomes in the following phases: definition of the interview questionnaire; selection of the study sample; analysis of the primary and secondary data for the study findings definition. Altogether, it is important to assess the potential role of the researcher's subjectivity and selection bias on the outcomes of the study.

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4. Results

4.1 Respondent 1

For the aims of study outcomes presentation, no personal information of the respondents was applied or mentioned. In this way, the personal names of respondents were changed for coded names: Respondent 1-5. According to the framework presented in Appendix 1, respondents were required to provide feedbacks about three aspects of their work experience as librarians. Results of interviews were presented in detailed transcript format in Appendix 2. This section of the paper provided a summary of the outcomes of the interviews.

In the section of the interview related to Administration, Respondent 1 clarified that during the last five years a high number of new technologies were implemented in the performance of the organization. At the same time, it was stated that only about 1 of 4 new ideas received annually from different members of CoP was implemented by management. The average period of new idea implementation is 3-4 months, due to the absence of professionals in this sphere and specific procedure for innovation implementation. Another source of problems in the application of new technologies was the absence of finances. Finally, it was argued that the management did not work with the CoPs to raise the level of their engagement within innovations.

For the aspect of Employees, it was stated that young librarians rarely spend more than 2-3 years in the organization, aiming to move to a more open and transparent organization with better financial conditions. They generate approximately 3-4 new ideas annually. At the same time, social media messages provide a similar number of new ideas for the organization of the library's work. The weakness of the social media strategy of the library is that it has no team for social media communication, and librarians are the employees responsible for online communication. The library performed two cultural activities online during the pandemic, but the poor quality of applied technologies did not allow it to attract a high number of visitors.

As for the aspect of Clients, the average age of visitors to the library is 35-50 years. Since the share of young visitors is low, the approximate share of social media users is lower than 30%. To collect feedback from the clients, librarians are required to provide them with the printed survey forms to fill. In general, the organization received about 10-12 new ideas annually from external sources, including social media and live messages.

4.2 Respondent 2

Respondent 2 argued that during the last five years his library experienced full digital transformation, with an average number of innovations being implemented annually equal 10-15 ideas. In general, approximately 70% of new ideas are being implemented successfully. The average time required for the realization of a new idea is one month if specifics of technology do not require higher time expenses. To increase the loyalty of CoPs, management of the library focused on arrangement of regular open meetings and events, which are also free of charge for members of the CoP. Usually, finances serve as a barrier to the implementation of new ideas, though management aims to implement ideas with the highest priority.

From the position of Employees, younger workers usually spend 4-5 years in the library, moving to the higher institution or staying in the library. Internal stakeholders usually generate about 7-10 new ideas per year. About 75% of new ideas come from social media accounts, where a special division was developed to collect feedbacks about perspective innovations. During the pandemic, the library arranged 5 online cultural events, which united a high share of young visitors and raised social media recognition of the library. In general, younger librarians take care of social media, which is an instrument of costs reduction.

The average age of clients in the library is 25-35 years. More than 80% of visitors use social media, which is an important tool of information exchange with the library. To communicate with clients, librarians and management run special groups on social media that collect anonymous or personalized messages from the visitors to inform them about the experienced problems and offerings. Management also monitors independent rating websites, where visitors leave feedback about the library. Several new ideas received externally annually are equal to 20-25 innovations.

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4.3 Respondent 3

Respondent 3 argued that his library did not pay high attention to the integration of new ideas during the last five years, mentioning only 3 serious improvements. In this way, less than 10% of ideas collected from the environment in the aspect of innovations were implemented during this period. The period of each idea's implementation was extremely high, more than a year, mainly due to the lack of managerial support and financial constraints. At the same time, the library did not obtain specialists capable of describing methods for the simple realization of innovations. Management does not actively cooperate with the CoPs, leaving this task to ordinary librarians. As for librarians, they usually do not have time or resources to work with the CoPs.

Young librarians rarely stay in this library for a period longer than a year. They do not observe opportunities for professional growth and self-realization, preferring to move to another library of the university. Several new ideas received annually from internal sources are equal to 3-5 innovations. The majority does not express new ideas due to a lack of trust in their practical realization. The organization is poorly presented online, mainly due to the absence of professional social media specialists and a lack of managerial support. Only about 1-2 new ideas come annually from these sources. Management did not pay attention to an arrangement of online social events during the pandemic, which led to the loss of popularity for the library.

The average age of clients visiting the library is 45-60 years. An extremely low share of visitors uses social media, which defined a lack of interest in this channel among management. To communicate with clients, librarians mainly communicate with them during live visits. In the majority of cases, no form of customer feedback is required. Clients are not interested in innovations, which defines an extremely low share of new ideas received from this channel.

4.4 Respondent 4

Respondent 4 stated that during the last 5 years approximately 10-12 new ideas were implemented in her library, which seriously impacted the outcomes of organizational performance. In these conditions, about 55-60% of achieved ideas were being implemented annually. The average completion time for a single innovation was about 3 months, defined with the speed of managerial decision-making and the need to define finances applicable for each idea. To raise the level of CoP loyalty and productivity, management and librarians of the organization arranged regular meetings and cultural events for them, created social media platform for communication and knowledge sharing. CoPs were provided with the opportunity to plan cultural events and expect financial support. Finances are a certain problem for the organization, but effective cooperation with CoP and charity organizations supported it in the past.

Young employees were found to spend approximately 5-6 years in the organization, mainly due to the presence of opportunities for professional development and self-realization. About 55% of new ideas in the organization were found to be generated by internal sources. Social media accounts of the company informed employees and management about 5-10 new ideas annually, which were still rarely implemented. The social media communication team of the library is mainly formed by librarians. Management arranged 3 online cultural events during the pandemic, aiming to raise the share of young visitors.

The average age of clients in the library is 30-35 years, with 80% of them actively using social media. To communicate with clients, the library applies both social media and direct communication instruments. About 45% of ideas for innovative development of library are generated externally.

4.5 Respondent 5

During the last five years, a high number of new ideas were implemented in the library, but they mainly faced failure or collapse due to lack of technical experience, poor understanding of clients' needs, and lack of finances. Only about 35% of new ideas received annually were approved mainly due to similar causes. The average time for the realization of a single idea in the library was equal to 6 months. Financial constraints were a serious factor for resistance to new ideas among management. No active means of CoPs support were utilized in the library, with management paying poor attention to this resource.

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Young workers spend an extremely low amount of time in the library – no more than 2 years. Annually, more than 5 new ideas were offered from internal sources. At the same time, the level of cooperation with social media was low since there was no single employee responsible for management and communication via social media. New ideas were rarely grouped and collected for analysis. Online cultural events were not held during the pandemic, leaving the library closed.

The average age of clients in this library is 40-50 years. Only about 40% of visitors use social media regularly, though they do not form communication with the library through this channel. To communicate with clients, direct communication channels are mainly applied. About 4-5 new ideas are collected from external sources annually, while the probability of their realization remains low.

4.6 Case Study Data

Following the definition of the main results of the interview analysis, the researcher used case study methodology to achieve a better understanding of specific conditions in a single target organization, which achieved the optimal results in terms of new technology integration. For the aims of case study analysis, the organization where Respondent 2 used to work was selected. The results of data analysis for the interview with Respondent 2 demonstrated that this library achieved one of the best results in performance, especially in terms of new technology integration. It was important to study the sources of such success.

The format of data collection and analysis for the case study method required the collection of data about the formats of cooperation and communication between the key categories of stakeholders together with the assessment of their attitudes and performance models in the organization. Specific stakeholders assessed during the study included librarians, management of the library, members of the CoP existing in the cultural organization, and the general community of visitors who did not form the CoP. First, the format of individual performance of each of these categories of actors was analyzed.

For the characteristics of the performance model of the organization's management, it is important to highlight the key findings related to the high level of transparency and proactiveness of management. Managers of the organization were usually met outside their office, walking across the library and talking to employees and visitors of the library. They used working hours to collect useful information about processes taking place in their organization. An important finding gained by the researcher in the process of communication with the management was that they most usually knew about specific challenges existing in the organization and understood opportunities for their resolution. In this way, the performance of the management could be characterized as open and proactive. These parameters could be considered important from the perspective of new technology integration.

Analysis of the performance model common among the librarians working in the organization demonstrated a high level of innovative thinking and motivation for change in the library. A high share of librarians that were considered during the case study demonstrated an active position in communication with other librarians, visitors, and management about current challenges and opportunities existing for the organization. This argument is especially relevant for younger employees. If older age groups of librarians were more passive in their performance model, young employees spent more time in communication with members of the CoP and ordinary visitors, collecting ideas from these stakeholders. The higher level of activity of young librarians was also observed through the fact that they attended CoP meetings arranged by the management of the library more often. Young librarians also supported the process of self-organization among CoP members.

In terms of the performance of ordinary visitors who did not form the basis of the CoP in the library, their behavior inside the library was characterized by high encouragement for cooperation with librarians and open communication on different issues. In addition to the traditional types of activities practiced by visitors inside the library (collection of books, search for materials, reading and making notes), visitors of this specific library spent much time during visits in communication with librarians. In addition to the traditional questions that were discussed in communications between these types of actors, visitors were found to consider such aspects of the organization's performance as positive changes that had been recently integrated, existing challenges, and technological means for their resolution. It was found that the librarians mainly supported arguments and ideas stated by visitors, encouraging a more proactive position among visitors. If visitors had not found such an active reaction on the side of

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librarians, they might have lost interest in the practice of challenges and discussion of technological solutions. The optimal model of communication allowed librarians to attract visitors as strong supporters in the process of change management.

The most important element of the case study data collected included data about the performance of the community of practice existing in the library. Since the main objective of the study was to determine the role of the CoP as an actor in technological changes in the cultural organization, specific processes taking place in this type of organization were analyzed. The CoP in the target library included 14 members, mainly representatives of the community of library visitors. During different meetings held by the CoP, about one or two librarians were present to support the communication and cooperation of members. They also collected ideas for the development of an organization, later delivering them to the management.

In the process of analysis of the CoP performance model, it was important to check the hypothesis about the negative role of the CoP in the integration of new technology into the organization. Among the main questions considered by the members of the CoP during their meetings, the following were determined: new publications and ideas stated in books and journals, new trends in culture that should be critically assessed, events in the media and public life that could influence society and culture. From the perspective of the problem of new technology integration, members of the CoP most usually received specific questions from librarians present at the meeting and were asked to provide their offers for resolution of the identified challenge. This fact shows that the members of the CoP rarely developed conversations on the issue of new technology applications without the support of the library employees. In the process of discussion of the stated issues, the brainstorm format was usually utilized. Members of the CoP shared ideas and searched for the format of a resolution that would satisfy all or at least the majority of members.

The process of discussion of the alternative positions stated by the members of the CoP was interesting from the perspective of identified barriers. Some members usually expressed critical positions about the role of new technology in the development of the library. These people were mainly representatives of the older generation, who lacked understanding of technology and considered it a source of discomfort in the future practice of applying library resources. They expressed the position that the need to integrate new technologies will make the process of working with library resources more complicated and uncomfortable for them. Most often, this barrier was removed during a detailed presentation of the offered technological solution, which demonstrated the simplicity of the offered method and the ungrounded nature of members' concerns. Most usually, opponents of the new technology accepted the provided arguments and agreed with the position of another party. Librarians rarely took part in the discussions on the side of one party, offering general support and consulting about specific questions, for example, whether it is realistic to implement specific technology from the perspective of its price and technological capabilities of the library or not.

It is important to highlight the conclusion that most usually, members of the CoP considered opportunities for the implementation of new technology, not the arguments against this intention. They were more motivated to find means to support new ideas rather than create barriers for them. In this way, the nature of the CoP influence on the integration of new technology in the target organization was quite constructive. In personal communications, a part of CoP members argued that they were highly motivated with the feeling of support and autonomy in decision-making they received from the management and librarians. They understood that employees of the library wanted to collect useful knowledge from the CoP and were motivated to provide the best result.

Following the discussion of the specific technology inside the group of the CoP, a message was delivered to the management of the library. In the final phase of decision-making about the implementation of the technology, conversation mainly took place between the management and librarians without the involvement of visitors and clients of the cultural organization. Employees and management discussed the resource and technological capabilities of the organization in terms of new technology implementation. It is important to highlight the fact that about 90 % of ideas discussed by the CoP members had progressed to the level of final discussion with the management. Such a result shows that the members of the CoP were not the actor responsible for the creation of barriers to the implementation of new technology in the library. Most usually, the final decision of management created real problems for the application of new technological solutions. Among the causes of a negative decision, the following were determined during the case study: financial constraints, limitations in technological capabilities

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of the organization, the absence of qualified technological specialists capable of implementing a new technological project. Most usually, management expressed support for new technological solutions but considered them objectively unrealistic at the moment of discussion.

Altogether, the findings of case study data collection and analysis demonstrated the positive attitude of all the engaged stakeholders to the idea of new technology implementation. Most usually, barriers to the application of new technology were caused by the objective resource constraints, for which management searched for means of removal. Altogether, the existing culture of change management in the organization supported innovations. The activity of the CoP cannot be considered a source of barriers to the implementation of new technology in the library.

5. Discussion

5.1 Findings of the Study

The findings of the study must be considered in the context of the initially stated research questions. In this way, to answer the first research question, the methodology of the literature review was used. The outcomes of the literature analysis demonstrated the significant role of CoP as an institution for the innovative development of cultural organizations and efficient knowledge management. From this perspective, the development of the CoP as a social format of interaction between stakeholders should be considered one of the main objectives of management and personnel in libraries.

Another finding of the study included the definition of the key factors creating barriers to effective integration of innovations in cultural organizations. The following sources of barriers were highlighted as the most significant: the lack of time, the exclusion of librarians from leadership roles, the lack of funding, inadequate staffing, the climate of competition in the workplace, technology resources, fixed schedule, the lack of role definition and absence of managerial support, and the lack of professional development and expertise. Based on the definition of the core sources of resistance to innovations in cultural organizations, specific recommendations should be offered.

The final finding of the research was associated with the empirical description of the existing situation in libraries in Florida from the point of CoP performance and innovation development. It was found that, despite the rising popularity of innovations in libraries, the lack of managerial support, low resource capabilities of librarians, and the lack of specialists and experience in technology, together with the low role of CoPs contributed, to the minimization of opportunities for the effective integration of innovations. Out of five different cases considered during the study, only two presented experiences of successful development of innovations, which depended on the support of management, the active role of CoPs and librarians. These libraries were more productive in attracting younger visitors and ensuring a better social media presence.

Specific attention was paid to the findings of a case study performed in one of the best libraries in the sample from the perspective of new technology implementation. It was determined that the existing culture of innovations' support among stakeholders of the library played a leading role in the successful development of new technology in the cultural organization. As for the barriers to productive application of innovations, they were mainly caused by objective resource constraints. In this way, the performance of CoP was not found to have a negative influence on the process of new technology utilization.

5.2 Importance of Findings

The importance of the study findings is associated with the theoretical and practical outcomes of the research. Among the theoretical outcomes, the significant role of the CoP as an institution of knowledge management and innovation development in cultural organizations has highlighted the outcomes of the literature review and comparison of practical cases from libraries in Florida demonstrated that organizations that relied on productive cooperation with the CoPs reached considerably better productivity in the implementation of innovative technologies. In this way, not members of the CoP but the personnel and management of cultural organizations could be considered responsible for the generation of barriers to knowledge management and innovation development. In all of the stated cases, members of the CoP were supporters of innovations, while the management mainly limited opportunities for their participation, similarly to the situation with librarians.

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In terms of practical findings of the study, it was argued that the implementation of innovations in cultural organizations depended on a high number of barriers, which had remained relevant. Key resistance factors included the absence of professionals capable of supporting the process of digital transformation of libraries, the low interest of management in innovations, and the absence of real means of transformation in the position of librarians. In addition, a certain part of management in libraries still considers innovations excessive. Such an outcome could be a result of a limited number of young visitors to such libraries. Innovative libraries, on the contrary, successfully attract young and creative visitors.

The importance of the case study findings was associated with the demonstration of the significant role of organizational culture in terms of new technology support. Openness and proactiveness of employees and management of the organization were found to have the highest positive influence on the probability of the successful implementation of new technology in cultural organizations. From this perspective, interest in new technology and support of autonomous decision-making among CoP members also encouraged members of the CoP to discuss new technology in detail and overcome the existing internal barriers to change more effectively. The findings of the study demonstrate that CoP can serve as a supporter of changes if an adequate format of cooperation between the CoP members and employees of the cultural organization is developed.

5.3 Implications of Findings

The implications of the study are mainly associated with the assessment of the main hypothesis of the study. The main study hypothesis aimed to assess the role of CoP in the process of new technology integration in cultural organizations. Based on the literature review and qualitative data analysis, the main hypothesis of the study was rejected. It was not proved that members of the CoP in cultural organizations had a negative influence on the process of digital transformation of libraries. In opposition, it was argued that the majority of the CoP members were highly motivated to support digital innovations, offering new ideas and technological solutions from within and outside the organizations.

The main sources of barriers to new ideas identified in the study included the lack of financial resources, the absence of professionals in technology that could support the digital transformation of cultural organizations, the low level of managerial support, and the limited capabilities of librarians in the process of digital transformation of operations. It was found that many librarians, especially younger generations of workers, were highly interested in the digital transformation of work experience. The fear of loss of work was not considered the prevalent decision-making factor thus losing leadership to the factor of self-realization and professional growth that could be achieved with digital transformation.

Based on the study findings, it is possible to develop specific recommendations for the future improvement of digital transformation in cultural organizations. Librarians should be provided with higher opportunities for autonomous decision-making. Management should change the perception of innovations and the role of CoP in the process of cultural organizations' performance.

The findings of the case study serve as a basis for the development of a more proactive and transparent model of corporate culture in modern cultural organizations. It is important for the management to avoid the model of authoritarian leadership thus creating opportunities for autonomous decision-making among employees and clients. CoPs could be considered serious agents of change support if provided with adequate resources and opportunities for change management.

5.4 Limitations of Research

The limitations of the study from the perspective of the utility of the key findings included a low focus on the aspect of practical recommendation development, together with the limited attention to the position of management and visitors of libraries as the key stakeholders. In terms of practical recommendation development, the main objective of this study was to analyze the role of CoPs in the digital transformation of cultural organizations. The outcomes of the study performed for libraries in Florida demonstrated that the CoPs did not create barriers to the productive development of innovative technology. In opposition, the findings of the literature review and empirical study showed that the CoPs could serve as a factor of change if supported properly by the management of cultural

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organizations. In such a context, it would be important to offer recommendations that could be applied to strengthen the positions of CoPs and librarians in the process of digital transformation. The presented study did not apply specific methods and tools that would allow the researcher to assess the reliability of specific recommendations in this sphere.

The second limitation of the study findings was the lack of interest in the positions of the management and visitors as key stakeholders of cultural organizations. This study used an interview method to assess the positions of librarians on the issue of new technology implementation. It was found that the management and visitors played other key roles in the generation of creative ideas for cultural organizations and the establishment of barriers to their realization. In such context, it would be important to apply similar research methods to collect feedback from these categories of stakeholders and develop a complex image of the situation in the sphere of innovation development and knowledge management in cultural organizations. This study demonstrated the irrelevance of the hypothesis about the negative role of CoPs in the development of innovations. It is important to solve the issue concerning the role of other actors in this process.

5.5 Opportunities for Further Research

Opportunities for further research in the context of this study are related to addressing the specific limitations of the research that had been earlier identified. The first problem to be stated in the further study should be associated with the development of recommendations for more active integration of innovations in cultural organizations. It is important to collect information about successful cases of innovation development and characterize the main conditions that have led to such outcomes for specific organizations. From this perspective, it is possible to focus on successful cases mentioned in this study or include the best cases available and described in the academic literature and relevant reports. Social media and traditional news sources present information about the cases of libraries and other organizations that have achieved the highest outcomes from the perspective of digital innovations integration and attraction of young visitors. It is important to collect information about these cases and perform a mixture of qualitative and quantitative studies to identify the sources of their success. Such findings could serve as a basis for future recommendations in terms of the digital transformation of cultural organizations.

The second opportunity for further study of the stated research problem is associated with the analysis of the subjective vision of the problem of innovation development among visitors and management of cultural organizations. The outcomes of this study demonstrated that these two categories of stakeholders played the leading role in the creation of opportunities, as well as barriers to the digital transformation of libraries. It is important to perform the collection and analysis of primary qualitative data from these actors to understand their vision of the main factors of digital transformation. Analysis of their experiences and perceptions could open new ideas and perspectives for the long-term development of the theme. Analysis of the subjective positions of these actors could also support specific recommendations in terms of innovative development of cultural organizations.

6. Conclusion

This paper analyzed the role of CoPs in the development of new technologies for the operations of cultural organizations. For the aims of the study, the key hypothesis stated that the performance of the CoP had a negative influence on the development of new technology on cultural organizations. To address this challenge, it was important to understand what specific factors created barriers to the productive implementation of new technology in cultural organizations. For the achievement of the study objectives, a qualitative study methodology was utilized.

The findings of the literature review and qualitative data analysis for the personnel of libraries in Florida demonstrated the irrelevance of the stated research hypothesis. It was found that the operations of the CoP did not generate negative outcomes for cultural organizations in terms of new technology integration. In opposition, it was argued that the CoP could establish an environment for improved knowledge management and the generation of innovative ideas for the operations of libraries. In contrast, it was argued that the absence of sufficient resources among librarians and the low level of support among management of libraries should be considered the leading factors of resistance to new technology implementation.

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Altogether, the findings of the literature review demonstrated the relevance of the following factors as barriers to the implementation of new technology in cultural organizations: the lack of time, exclusion of librarians from leadership roles, limited funding, inadequate staffing, the climate of competition in the workplace, technology resources, fixed schedule, the lack of role definition and absence of managerial support, and the lack of professional development and expertise. Analysis of the real-life cases of libraries in Florida also demonstrated that the problems with the integration of new technology were not associated with the influence of CoPs. In cases when technologies were successfully implemented, management and the CoPs operated together and achieved higher results. In contrast, in the conditions when technology lacked development, management usually ignored the position of CoPs and did not provide adequate opportunities for the development of innovations.

Based on the determined findings of the study, specific recommendations for the future practice of technology integration in cultural organizations could be offered. First, it is important to analyze and modify the vision of new technology's role for operations in the management of libraries. Analysis of different cases in the literature review demonstrated that libraries made high progress in the integration of innovations when all stakeholders shared a high interest and belief in the promising nature of innovations' application. From this perspective, it is important to determine measures that would raise the level of management motivation for support of innovations in cultural organizations.

In addition, it is important to analyze potential solutions for the improvement of the performance capabilities of librarians in terms of integrating innovations. Analysis of different cases demonstrated that librarians mainly lacked competencies, decision-making authority, and financial resources for the effective integration of innovations. At the same time, a rising number of librarians demonstrated support for new technology, and the absence of fear of job losses caused by the integration of new solutions. In this way, it is important to consider the applicable means of librarians' capabilities improvement and their support for the integration of new technology. The specific role of CoPs in the process of transformation of digital processes in libraries should be considered. Findings of the additional study should form the basis for the understanding of measures that should be taken to raise the level of competitive attractiveness and popularity of libraries, especially among younger generation of visitors.

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Appendix

Appendix 1: Interview Questions

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?
2. How many new ideas received annually (by employees and/or clients) get approved?
3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?
4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?
5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

Employees (concerned by/responsibility of):

1. What is the median tenure for workers age 25 to 34 in your organization?
2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)
3. How many new technologies' ideas do you get through your social media accounts and website?
4. Is there a dedicated team for communicating through social media accounts/ website/application?
5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (Example: people with memberships and active use of the library facilities)
2. What is the percentage of people using your social media accounts/website/application to communicate and use services Vs. those who prefer direct/personal service?
3. How does your organization get feedback and communicates with its clients?

4. How many new ideas do you get externally annually? (clients)

Appendix 2: Interview Transcripts

Respondent 1

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?

During the period of last 5 years, our organization implemented a high number of new technologies and innovative solutions for the organization of teamwork and satisfaction of the visitors' needs. Key sphered where the innovations were applied are related to the organization of knowledge storage, literature search engine, social media platforms integration, and online events organization. These innovations were mainly implemented through productive cooperation between librarians and visitors since both parties supported the changes that were implemented.

2. How many new ideas received annually (by employees and/or clients) get approved?

Even though a high number of innovations were implemented recently, a considerably small number of ideas reached the final stage of realization. Recognizing the number of ideas that were received by our organization in the past from different sources, I can say that approximately only one of four innovations was implemented in practice. I can say that many new ideas stated for implementation faced serious criticism from management or librarians or did not receive adequate support from the administration. In certain situations, we as a person might not have understood the potential value of the idea and its relevance for the long-term development of the library. It is important to say that in certain conditions we returned to the earlier rejected ideas later, understanding that the earlier made decision was a mistake.

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3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?

Analyzing the number of cases I can remember, the average duration of the period for realization of a single project in our library was about 3-4 months. I can say for sure that this process was rarely quick in the case of our organization. Even if management and employees of the library were highly motivated to implement the specific idea or technology, the process would be complicated due to the objective factors. Among such, I can mention the absence of required professionals able to lead the process of change management, and the lack of understanding of specific procedures for technologies integration. The majority of the employees and administrators in the library do not obtain the required education and experience to manage innovations, and we also have limited funds for the attraction of specialists on an outsourcing basis.

4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?

It is difficult for me to say what specific measures are taken in our library to work with members of the community of practice. I can say that we might not even have a formalized community of practice, which could perform the full range of its potential functions for the development of the library. We have a group of visitors who are active in cooperation with librarians to offer innovations for the organization. Nevertheless, we have no formal group that would meet at certain locations and with a certain frequency and duration. We have no clear plan for the development of the community of practice in our organization and apply no means of support for such a community. Altogether, I can say that we have no policy or initiatives to support the community of practice in our library.

5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

I can say for sure that the problem of lack of finances is relevant for our organization. I experienced several cases when the promising ideas of mine or my colleagues were rejected due to the absence of required funds for their implementation. One of the favorite arguments of our senior manager is that we cannot afford the specific solution by now and that he does not observe strong arguments for financial benefits that could be generated with this idea. As a result, we usually have to persuade the management that a specific idea could generate financial, not only reputational returns for the organization. I can also say that the factor of the absence of professionals plays a role in this issue. If we had qualified specialists among our employees, they could have offered better solutions to the stated issues, involving lower funds. Nevertheless, we usually have to spend excessive funds on specific ideas.

Employees (concerned by/responsibility of):

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1. What is the median tenure for workers aged 25 to 34 in your organization?

Unfortunately, we do not have many young librarians in our organization. When a young specialist comes to our library, his average time spent with us is about 2-3 years. I can remember a very small number of employees who spent more time with us. In their cases, the main reason for the long period of employment was high sympathy with the colleagues and desire to stay in touch with them. One of the main reasons for early leave among young specialists is that they obtain limited opportunities for professional development and the realization of their ideas. I remember several cases when employees preferred to leave for another library or university since they expected better opportunities for self-realization there. At the same time, young specialists are highly concerned with the financial conditions of employment, and terms in our organization are not optimal from this point.

2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)

It is quite difficult to say what number of ideas we receive from internal stakeholders on the annual basis. I might be more precise if we had a specific procedure for registration and documentation of these ideas. As I can remember from my previous experience, I can mention about 3-4 new ideas that have been proposed by our internal actors on the annual basis. I must say that the main source of new ideas for our organization is librarians. Management is quite passive in the question of new ideas and technologies implementation. They are more concerned about the sustainability of current operations, paying limited attention to the prospects. As for librarians, they are permanently in touch with visitors, so they see specific needs of the audience and search for means to satisfy them.

3. How many new technologies' ideas do you get through your social media accounts and website?

In my previous work, I experienced serious support from social media and website sources. Information from these platforms allows librarians in our organization to learn about the needs and expectations of the visitors, their level of satisfaction with the offered services. As for the delivery of new ideas and technologies, I can say that the number of ideas offered through social media and websites was quite similar to the number of ideas generated by our internal stakeholders. I see the reason for such low activity of visitors as caused by the ignorance of this source of insights by our management. We never asked visitors to share their opinions about the opportunities for new technologies application. In this situation, only the most proactive visitors decided to share their position and ideas.

4. Is there a dedicated team for communicating through social media accounts/ website/application?

Unfortunately, our organization does not obtain a specialized team of professionals responsible for the

management of and communication through social media platforms or websites. Management of our library does not see a sense in the employment of specialists for this specific role, preferring to deliver associated functions to librarians. Forced to be responsible for the management of social media, our librarians usually lack time and power to give sufficient effort for communication with visitors through social media. It leads to higher time requirements for responses to messages, lower quality of messages monitoring and documentation. Certain useful ideas and messages could be lost.

5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

The period of pandemics forced our library to focus on online events as a format of visitors attraction. In the conditions when live visits were limited, the management of our library was forced to approve additional expenses for the arrangement of two online cultural events. We performed the presentation of a new book by one of the modern authors and presented a new platform for the search of books in digital format on our official website. The objective of both activities was to attract new visitors and raise the overall level of interest in the library among the audience. Unfortunately, the events, in general, did not lead to the best outcomes, mainly due to the poor quality of technologies applied. We usually faced the problems of lags and freezing in broadcasting.

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (example: people with memberships and active use of the library facilities)

The average age of visitors to our library is 35-50 years. Unfortunately, we did not manage to form the representative population of younger generations of visitors in our library. I think that this result is an outcome of low interest in the application of new technologies in our library. Younger generations of readers prefer to use digital formats of knowledge consumption, and we cannot offer appropriate forms of experience to them. For now, intentions to build a new model of knowledge sharing in our library did not reach success due to earlier mentioned reasons.

2. What is the percentage of people using your social media accounts/website/application to communicate and use services Vs. those who prefer direct/personal service?

The majority of the current population of our library are not people who are interested in the application of digital platforms for the consumption of knowledge. During personal communication with our visitors, I usually heard that they prefer to receive personal service in the library. They like the experience of printed books and live chatting with a librarian instead of the digital format of literature search and reading. For part of our visitors, the experience DOI:

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of visiting a library is important from the point of socialization. They do not consider communication online as an option, and visits to the library allow them to meet with other readers, communicate and discuss the new books and publications. I think that only about 1 out of 3 visitors use social media platforms on regular basis.

3. How does your organization get feedback and communicates with its clients?

As I said earlier, our clients mainly prefer to communicate in a live format, and there is no sense to try to collect feedback from the online format. We performed similar experiments in the past, trying to arrange public surveys on our website and social media. The high share of visitors argued that they did not check the social media accounts of the library and did not learn about the survey. In these conditions, management of the library forces librarians to give clients printed survey forms that they should fill to assess the quality of experienced services in the library. We perform such surveys on regular basis (once per month) and analyze feedbacks to improve our performance. I think that the online format of the survey could be much easier for implementation and analysis of results.

4. How many new ideas do you get externally annually? (clients)

I can say that clients are quite active in the promotion and proposition of new ideas for the development of the library. We usually chat with our visitors in the library, and they are happy to share new ideas and propositions if asked about. Unfortunately, our management does not perform a regular collection of new ideas from the visitors and does not encourage visitors for sharing such ideas. We as librarians try to fulfill this function, but sometimes we lack the competence to figure out the idea or assess its potential benefits for the library. In general, I think that clients generate about 10-12 new ideas on the annual basis. I named this range of numbers since I can remember at least one good idea provided by our clients during each month in my previous work.

Respondent 2

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?

I can say that the period of the last five years was characterized by the full digital transformation of our library. On average, we implemented about 10-15 new ideas on the annual basis. One of the main sources of success of such transformation was productive cooperation between librarians, management, and visitors. We all worked for the development of new ideas and search for the optimal means for their practical realization. In certain cases, cooperation allowed stakeholders to determine the cheapest format of innovative solution implementation. Sometimes, visitors supported us as librarians if we lacked knowledge about technologies. Altogether, all the engaged

parties clearly understood the significance of digital transformation and the need for its successful completion.

2. How many new ideas received annually (by employees and/or clients) get approved?

The process of cooperation between different actors in the library led to the active approval of new ideas. Only the least promising or most complicated from the point of practical implementation were rejected. At the same time, sometimes we had to abandon a promising idea if we lacked resources for its realization. Nevertheless, if the specific idea was found to be perspective and useful, management tried to return to its implementation in the future, when the resource capabilities of the organization could be improved. Altogether, we managed to implement about 70% of new ideas received regularly. For all other ideas that were rejected or removed to the later period, we carefully documented them to be able to reconsider them in the future.

3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?

I can say that all actors engaged in the implementation of innovations in our library tried to spend a minimal amount of time for the completion of each project related to innovative technologies. The average time for integration of the specific technological innovation was equal to 1 month. First, the management of the organization considered the perspectives of the idea or technology. If the idea was approved, the procedure of project costs and schedule assessment took place. The management team aimed to form the optimal plan for the completion of the project from the points of duration and cost. The presence of a detailed plan and readiness to follow it allowed us to minimize the duration of every single project. Nevertheless, the process could last longer if the specifics of technology required it.

4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?

Management and librarians pay high attention to the development of our community of practice. It is considered one of the generators of changes in the organization, which generates additional resources for the library. To maximize the level of CoPs' engagement in the digital transformation and operations of the library, management arranges regular meetings for all members of the community, which is also free of charge. We are interested in the creation of conditions for regular meetings and the cooperation of community members. Such a format of cooperation allows them to stay in touch, remain motivated for support of the library, and generate new ideas on regular basis.

5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

I can say that in certain conditions lack of finances could prevent us from the implementation of promising and prospective solutions. We sometimes had to delay the realization of the perspective technology, hoping to collect sufficient funds in the future. Nevertheless, to avoid the need to completely reject the best ideas for the future, management aims to build a prioritization plan for innovative development. In this way, librarians and management collect a full list of ideas provided by internal and external actors. Management considers the list and selects projects that should be implemented as the highest priority. They search for funds and prioritize ideas accordingly.

Employees (concerned by/responsibility of):

1. What is the median tenure for workers aged 25 to 34 in your organization?

I can say that young librarians spend a high amount of time in our library, finding the appropriate working conditions and environment for professional development. On average, young workers spend about 4-5 years in our organization. The main reason for moving to another organization is that they seek the next step in professional development, and I consider this situation as normal. Young specialists find appropriate conditions for the development of innovations and the acquisition of new competencies with us. At the same time, management provides adequate conditions for autonomous decision-making, which is a value for young employees.

2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)

Employees in our organization are highly motivated to generate new ideas for future performance. Management encourages personnel to develop new ideas, in both monetary and non-monetary ways. We have periodic meetings with the management, where administrators consider the progress of librarians and highlight the achievements of specific employees succeeding in different spheres. One of the most important spheres is related to the development of innovations in the performance of the library. As a result, each employee aims to show the best progress. On average, 7-10 new ideas are generated by employees annually.

3. How many new technologies' ideas do you get through your social media accounts and website?

To define promising ideas for innovations, the management of the library ordered the launch of a new division on the organization's website and our social media. As a result, all the visitors to our digital platforms can determine the place where they could leave feedbacks about innovative ideas for future implementation. Such a format simplifies the process of communication about innovations and the process of documentation of specific messages about the ideas. We are able to always return to the division on the website and social media and reconsider certain messages. I

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think that about 75% of new ideas for the development of the library come from social media.

4. Is there a dedicated team for communicating through social media accounts/ website/application?

Unfortunately, our management did not find sufficient resources for the arrangement of the specific team responsible solely for the development of social media. We might have benefited from productive social media marketing, but currently, we lack resources for this strategy. As a result, management decided to deliver functions of social media platforms management to younger librarians. They usually have more experience in social media and find it more comfortable to work online. At the same time, such a strategy allows the library to cut operational costs. For now, younger librarians do not express concerns about excessive work overload related to social media platforms management. Nevertheless, there is always such a risk, and we should be ready to develop a specialized team in the social media sphere.

5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

The period of pandemics allowed our library to gain useful experience of online cultural events arrangement. In general, five events were held since the beginning of the pandemic and isolation restrictions. Management highlighted the importance of digital events holding as a means of marketing and promotion of the library. Outcomes of these events included the attraction of new visitors and subscribers to our social media. As a result of the successful digital promotion of the library, we managed to attract new investors and partners interested in cooperation with our organization. At the same time, an additional source of income in the form of digital advertising was tested. Online events raised the level of financial capability of our organization.

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (example: people with memberships and active use of the library facilities)

The median age of visitors to our library is 25-35 years. I am highly satisfied that we managed to develop the young population of our visitors, also including older generations of clients. Mainly, young people are attracted to our library via opportunities for the application of new digital technologies and means of knowledge acquisition. Young people find it easier to use the support of librarians during a search of specific literature compared to the independent search via Google or another search engine. The experience and knowledge of librarians about the literature are still valuable for young people despite the development of new forms of knowledge search and consumption.

2. What is the percentage of people using your social media accounts/website/application to communicate and DOI:

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use services Vs. those who prefer direct/personal service?

Because the population of visitors to our library is young, the majority of them prefer to use social media for connection with the organization. According to the relevant statistics of visits and number of subscribers on our accounts in social media, about 80% of live visitors also collect useful information about our library online. Our librarians perform regular publication of useful information to keep the level of interest in our social media on a high level. Our clients assess the quality of social media platforms management as high.

3. How does your organization get feedback and communicates with its clients?

Management of our organization developed a set of groups on different social media platforms to collect feedback about the performance of the library from clients. Each of the groups has a specific division where visitors could leave official or anonymous feedback about their experience of cooperation with the library. We encourage our customers to deliver any type of feedback, avoiding negative reactions to most radical criticism. We are usually grateful for any type of feedback delivered, especially the one that included ideas for improvement of performance and resolution of specific issues. Management of our library also uses alternative sources of data to determine clients' feedback. For example, we monitor independent ratings online that collect feedback from clients about our library. Even if they did not wish to inform us directly about certain criticism, we will be able to find out this data and adapt accordingly.

4. How many new ideas do you get externally annually? (clients)

I can say that the number of new ideas collected externally on annual basis is very high. We aim to document all the new ideas to avoid the loss of any type of valuable knowledge for the future. Previous experience allows me to say that about 20-25 new ideas are collected annually from external sources. Management of the library documents and analyses all the proposed ideas to determine the most promising ones and implement them.

Respondent 3

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?

Unfortunately, our library did not integrate a high number of innovations or new technologies during the last five years. I can remember only 3 new technological solutions that were implemented in our library, and they were mainly integrated during the last 2 years. Before this period, our organization and management did not pay specific attention to the issue of new technologies implementation. It was a mutual decision of our management and ordinary employees – neither of the

company's members expressed direct interest in innovations. Recent changes in attitude to new technologies can be explained by the rising influence of the market and competitive tensions.

2. How many new ideas received annually (by employees and/or clients) get approved?

I do not think that a high share of received ideas is being implemented. Many ideas are lost due to the ignorance of innovations among management and lack of reporting among librarians. We do not have a certain solution that could allow us to document new ideas and collect them for future practice. As a result, I think it is possible to say that only about 10-15% of new ideas reach the phase of practical implementation. These are mainly the projects that were found to be cheap enough or easy in the aspect of technical realization. From this point, we usually reject certain ideas due to technical difficulty in realization.

3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?

The definition of the end period for the realization of certain technology in our library is one of the main sources of concern. It might have determined the reason why new technologies are applied so rarely. On average, I can remember that the realization of a single idea took more than 1 year. It included the discussion of the proposition among management, assessment of the budget, assignment of responsible party inside the library, and planning of the process. The absence of qualified technicians did not allow us to build a more productive planning process. At the same time, the problem of finances is significant. For part of our projects, we had to stop the work since no funds were available. As a result, responsible employees had to wait for the management to provide additional finances.

4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?

The management of our library recognizes the fact of the existence of a community of practice in our structure, but it does not motivate them to pay more attention to the support of this community. In general, our management did not deliver a detailed plan for the long-term development of the community of practice, so we do not know what to do with this actor. Management delivered functions of the management of the community to ordinary librarians. We have to decide whether to arrange meetings for the community of practice, what questions to consider, and all other matters. The problem here is that we do not have free time to run the operations of the community of practice. At the same time, ordinary librarians poorly imagine the process of a community of practice management. Altogether, we usually do not know what to do with this unit. Such a situation does not raise the spirit of the community members.

5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

The problem of lack of finances is one of the leading barriers to the productive realization of innovations in our organization. As I stated earlier, more than half of projects were initially rejected only because management did not see ways for their practical implementation. I am very disappointed that we had to reject certain good ideas forever, even without the discussion of opportunities for future reconsideration. At the same time, even if the project was found to be realistic, we faced the problem of budgetary deficit several times. In these conditions, management had to stop the process of new technologies integration, waiting for the end of the current operational period and accumulation of funds.

Employees (concerned by/responsibility of):

1. What is the median tenure for workers aged 25 to 34 in your organization?

The problem of early retirement of young workers is a disaster for our library. I am afraid that we cannot create conditions for young specialists to stay with us. On average, a single young specialist stays in our library for a period shorter than a year. It is common that young specialists quickly lose motivation for work and start seeking a new workplace. I can see the changes in their mood that take place. Specialists lose interest to work processes, do not take part in group communication between librarians, and express criticism about their work experience. Unfortunately, management rarely listens to young employees.

2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)

Internal sources of innovations are quite limited, and about 3-5 new ideas are being proposed annually. Such a situation is partially caused by the actual loss of trust in the perspectives of innovations integration. Many workers express the opinion that their ideas will not be met with appropriate enthusiasm and interest among management. Such situations took place usually in the past, so much of a reaction is quite realistic. Some employees considered certain innovations and ideas with me earlier. When I offered them to share good ideas with the management, they were quite skeptical and pessimistic. I am afraid that such an attitude could generate serious issues for our organization.

3. How many new technologies' ideas do you get through your social media accounts and website?

I cannot say that we use social media and official websites to collect ideas for the development of the organization. Management of the library runs social media and website without our support, and we receive any type of information from this source quite rarely. I can mention

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only 1 or 2 cases when new ideas came from social media and management discussed them with us. Most usually, we cooperate with our clients in a live format. It is difficult for librarians to say whether social media and the official website of the organization play any specific role in the collection of new ideas for growth.

4. Is there a dedicated team for communicating through social media accounts/ website/application?

I cannot say that we have a specialized team responsible for the management of the social media accounts and the library's website. Management runs these channels independently from other employees, and we rarely receive any information about the situation in these channels. We can observe the contents of our social media as outside viewers, but we cannot see what happens from the owner's side. We do not see the actual attitude expressed by our visitors and clients and cannot improve our work accordingly.

5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

No, we did not arrange any type of public event with social media or websites during the pandemic. Mainly, our library was closed during the period of lockdown, and this situation led to the resignation of a high number of promising librarians. I know that part of people moved to other cultural organizations that were more active online during the pandemic. For our library, the absence of any type of presence online caused a serious reduction in popularity and loss of visitors. Part of the audience forgot about our organization. I recently met one of our old visitors, who did not visit our library for a long period. He said that he considered our library as closed because he did not hear about us online during the pandemic.

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (example: people with memberships and active use of the library facilities)

The average age of our visitors is 45-60 years. We serve the needs of older generations of visitors, who consider the format of our work as correlating with their expectations and the format of library performance. Since we do not apply new technologies in our work, young readers do not consider it important to visit our library. And older generations of visitors are quite conservative and are satisfied with no need to adapt to new solutions.

2. What is the percentage of people using your social media accounts/website/application to communicate and use services Vs. those who prefer direct/personal service?

It is difficult for me to name a specific share of visitors who actively use social media channels. I can say for sure that this share is extremely low and could be even ignored. In

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my live communication with visitors at the library, I rarely heard about situations when a visitor would learn about certain news from the library by social media or our website. As I said earlier, our visitors are highly conservative.

3. How does your organization get feedback and communicates with its clients?

We as librarians do not communicate with visitors via social media or website channels. Management just does not give us access to these channels. In this way, we can collect any type of feedback from the visitors only during their live visits. We mainly chat informally to identify certain information or provide small, printed surveys for visitors to fill. All these channels still do not guarantee the adequate quality of visitors' needs understanding.

4. How many new ideas do you get externally annually? (clients)

I cannot say that our visitors are generators of new ideas for the library. Since clients in our age groups are quite conservative people, they rarely speak about things that could be changed according to their needs. As a result, I cannot say for sure whether clients even generate new ideas for our library.

Respondent 4

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?

I can mention about 10-12 new ideas that were implemented in my organization during the last 5 years. All of these technologies had a serious influence on the current state and perspectives of our library. Certain innovations in the sphere of human resource management were applied. We received a transparent system of librarians' motivation and progress assessment. In addition to this, I can say that the new format of communication with visitors was established with the usage of social media and websites. We make regular publications on social media that help us to stay in touch with our audience. Altogether, I feel quite optimistic and satisfied about the work with innovations that was performed recently.

2. How many new ideas received annually (by employees and/or clients) get approved?

I can say that quite a high share of new ideas was implemented in our library. Discussion of the recent experience makes me say that about 55-60% of projects were led to the result. A similar tendency was maintained during the last 2 years of work. In the past, we had more problems with the management of technological projects, so a smaller share of ideas could be applied. For now, improved project management and planning performed by management allows us to reach better outcomes and increase the share of successfully realized ideas. In the

future, I hope that we can further optimize our performance and reach even better outcomes in the aspect of projects realization.

3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?

The average period of one project's completion in our organization lasted for 3 months. I cannot name this period as optimal, but I must also say that during the last 3 years this period was even longer, up to 5-6 months. In this way, the main sources of delays include high time requirements for managerial decision-making, and the usual disease of our organization – lack of finances for current expenses. As a result, we usually have to build a prioritization plan to define the most important ideas for implementation. Sometimes our plans do not work properly, and the budget deficit leads to delays and risks. Altogether, I hope that in the future we will be able to address the problem of schedule planning more effectively. In certain aspects, the support of qualified technical specialists could help us build more productive project plans.

4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?

Management and librarians in our organization pay high attention to the planning and organization of events for members of our community of practice. All the employees of the library value the role of the community in the development of innovations and knowledge sharing. To support the operations of our community of practice, management developed a plan of meetings and cultural events for our CoP members. At the same time, a community of practice is provided with the unique opportunity to plan its events independently and set budget requirements for the implementation of the specific initiatives. Management of the library will determine whether specific initiatives of the community of practice should be financed or not.

5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

The problem of lack of finances is relevant for our library, similar to the majority of other libraries operating in the industry. At the same time, management developed a set of solutions to address this issue effectively. One of the specific solutions is related to cooperation with the community of practice to cut operational costs and attract volunteers. At the same time, the management of the library cooperates with charity organizations to find free funds for innovation development. In certain conditions, these strategies present serious benefits for the organization.

Employees (concerned by/responsibility of):

1. What is the median tenure for workers aged 25 to 34 in your organization?

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Young employees usually spend a high amount of time in our library. I can say that the average time spent by ordinary young employees in our organization is equal 5-6 years. Mainly, young specialists favor opportunities for self-realization and professional development in our organization. Management provides young workers with a high level of autonomy in everyday operations, also supporting innovative ideas of workers. As a result, the majority of young workers I communicate with express a high level of motivation and satisfaction with their work experience. The share of young employees working in our organization increased during last 3 years, which is also a sign of positive changes in our library.

2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)

I can say that about 55% of new ideas in the organization are being implemented by the internal actors. From this perspective, librarians usually consider the existing processes in the organization and opportunities for modification of situations in the future. Employees are not prohibited to offer innovations, which is an important factor in the process of new idea development. Nevertheless, only a small part of the ideas reaches the final realization phase due to the earlier mentioned restrictions. In this way, an improved process of ideas realization could contribute to better involvement of employees in the process of ideas generation.

3. How many new technologies' ideas do you get through your social media accounts and website?

I can say that about 5-10 new ideas were provided from the website and social media resources of the organization during the last year of operations. Similar to the situation with the internal ideas and innovations, these projects were rarely implemented. Visitors and clients of our organization usually use social media platforms to express their opinions about the performance of the organization and opportunities for change. In the majority of cases, we try to collect such feedbacks and communicate with visitors to learn more about their vision of the existing problems. Unfortunately, since librarians are responsible for this work, we sometimes lack time and other resources to collect all useful data about propositions.

4. Is there a dedicated team for communicating through social media accounts/ website/application?

Even though our library recently experienced serious performance improvements, we still lack a specialized team of professionals who could be assigned for social media marketing. Librarians are mainly responsible for the management of the website and social media. We have to communicate with clients, publish new media messages and control the reaction of the audience to our media policy. In certain situations, librarians lack capabilities to timely respond to clients online, which does not allow us to build transparency and trust with our audience.

5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

Since the beginning of the pandemic and caused isolation restrictions, our library arranged three public events online, including presentation of new services for visitors and discussion of specific books of modern authors. These events united loyal visitors of the organization and a new audience, who managed to communicate and share ideas about certain aspects of the culture and performance of the library. The main objective of these events was to raise the level of public recognition of the library and attract a new audience online.

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (example: people with memberships and active use of the library facilities)

The average age of clients engaged by our library is 30-35 years. This is quite a young audience interested in new trends and technologies. They value the process of digital transformation our organization demonstrated during the last years. Before the integration of recent innovations and new technologies, our population of visitors was considerably older. The younger population of visitors forces management and employees of the library to integrate new solutions for the realization of their demands in the accumulation of knowledge. In addition, the young population actively supports changes in the performance of the library.

2. What is the percentage of people using your social media accounts/website/application to communicate and use services Vs. those who prefer direct/personal service?

I can say that the majority of our visitors currently use social media and the official website of the organization to stay in touch with us. Altogether, I can suppose that about 85% of our clients use social media on regular basis. I can state such numbers through the analysis of regular statistics of social media activity of our visitors – numbers of views, likes, reposts, etc. The majority of our clients use means of online communication to share their views about the development of our library and critics for future transformation.

3. How does your organization get feedback and communicates with its clients?

In the process of communication with the clients of our library, both the means of digital and live communication are applied. Librarians stay in touch with our clients online via social media and the official website of the organization. We guarantee a polite and calm reaction to any type of feedback, especially to the most critical ones. Management forces librarians to consider the criticism and react effectively to mitigate the risk of conflict. As for the live communications, librarians always support

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communication with clients who visit our organization, both to share useful information about our performance and to collect feedback about their experience of visiting the library.

4. How many new ideas do you get externally annually? (clients)

In general, about 45% of new ideas for the development of the organization come from our clients. In the majority of cases, clients prefer to leave their feedbacks and recommendations online, for the management to be able to observe them and discuss them in the future. In addition, clients consider online publication of their feedbacks with new ideas as guaranteeing a higher probability of successful discussion of their ideas by the management. Nevertheless, it does not mean that clients do not use means of direct communication to share their visions of the problems.

Respondent 5

Administration (concerned by/responsibility of):

1. How many new technologies were implemented in the last five years in your organization?

I can give quite a contradictory response to your question. Our organization and management team implemented a high number of innovative solutions and technologies during the last five years of operations. Management highlighted the role of new projects for the future development of the organization. Unfortunately, a major part of these initiatives demonstrated failure and reached final collapse. The expenses for their realization never returned, and the actual outcome was considerably worse compared to the planned outcomes. Management explains such results mainly with the low level of technical experience among employees, lack of clients' needs understanding, and deficit of finances. In certain conditions, we did not fully understand what was required to be done and entered a compromise. In the end, such solutions did not lead to the desired outcomes.

2. How many new ideas received annually (by employees and/or clients) get approved?

I can say that the similar issues that led to the failure of a major part of innovative ideas also caused a low level of recognition of specific innovations in the organization. Among the variety of new projects that were offered to the management, only 35% of them were implemented. Management usually argued that specific ideas are promising and attractive, but no funds could be found to afford these projects. In other cases, management did not understand the actual value of certain ideas or did not obtain technical resources for their implementation. Altogether, internal factors mainly forced our organization to reject many promising ideas.

3. What is the average time (how long) does it take for an idea to get implemented (from the day it is received)?

The average time required for completion of the single project in the organization was equal to six months. In the majority of cases, management required a high amount of time to make the specific decision about the implementation of ideas. In certain situations, high time expenses for decision-making led to the outcomes when specific idea lost their relevance and utility. The absence of technical specialists in our library did not allow the management to determine the specific strategy that would contribute to the simple and quick realization of the project objectives. Altogether, we could reach better outcomes of projects implementation, but mainly the position of management did not allow us to do this.

4. What are the initiatives that your organization provides for increasing the loyalty of their CoPs?

Management of our library did not pay any specific attention to cooperation with the community of practice. Our members formed a community engaging in group events and discussing relevant problems of library performance. Librarians usually take part in such discussions, sharing their positions about the key aspects of the library's performance. Unfortunately, the management of the organization pays no attention and respect to this format of activity in the organization. Community of practice shows low progress in development, mainly due to the absence of observed opportunities for direct influence on changes in the library.

5. Are finances and budget in your organization a reason preventing you from conducting new technologies?

Financial factor plays one of the key roles in the creation of barriers to implementation of new ideas and technologies. In addition to a permanent deficit of funds for new projects, our organization faces the issue of ineffective utilization of capital. As I stated earlier, a high share of projects faced collapse in the future. During these projects, the initial budget of innovation's implementation was overrun. Management of the organization formed the stereotype that the implementation of innovative technologies is associated with the uncontrolled risk of cost overrun. As a result, management currently demonstrates reducing readiness for innovation development, mainly due to the permanent fear of uncontrolled losses that could be experienced.

Employees (concerned by/responsibility of):

1. What is the median tenure for workers aged 25 to 34 in your organization?

Young workers usually spend less than 2 years in our organization before moving to another workplace. They expressed high motivation for the digital transformation of the library. Unfortunately, since management demonstrated reducing level of motivation and support for innovation development, young employees keep losing interest in professional development in our library. Last years were characterized by the reduction of incomes for the library,

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which also led to the small cut of salaries for the personnel. In these conditions, young employees could lose the last motivation to work in our library.

2. How many new ideas do you get internally annually? (Internally: employees and stakeholders)

Internal sources generate more than 5 new ideas for technological development annually. These ideas most usually come from younger employees, who have sufficient knowledge about new technologies. They also understand what specific benefits could be generated by specific innovations for clients and organizations in the long term. When we discuss ideas with them, older librarians could explore the benefits of offered strategies. Unfortunately, it is quite difficult to provide a similar vision of the situation to the management team. Managers are usually closed to new knowledge and quite skeptical about innovative ideas.

3. How many new technologies' ideas do you get through your social media accounts and website?

Our social media accounts and website do not work properly for the generation of social communications networks with our clients. Management does not pay specific attention to the development of social media accounts or the official website of the company. Librarians usually also lack the resources and time to manage social media effectively. As a result, even if the clients aim to deliver innovative ideas through social media and the official website, we rarely collect feedback.

4. Is there a dedicated team for communicating through social media accounts/ website/application?

Management of our organization did not provide sufficient resources for the management of social media accounts and the official website of the organization. No specific employee was assigned as responsible for the management of social media and the official website. Each librarian runs this function during his/her work period. As a result, no single strategy of social media accounts management was developed, and it is difficult to form productive communication with clients. Single librarians could pay more attention and show higher responsibility in the realization of this specific function. At the same time, another employee might not consider this function as important.

5. Did you conduct any workshops/panels/cultural activities virtually during the pandemic?

The period of isolation caused by the COVID-19 pandemic forced our management team to decide about closing the library. We did not perform any type of online public activity during this period. The management team forced employees to spend more time and effort on the management of social media accounts and the official website. Nevertheless, no efforts were made to integrate new technological solutions and run online cultural events.

As a result, our organization faced financial losses and lost recognition and the support of visitors.

Clients (concerned by/responsibility of):

1. What is the average age of your clients? (example: people with memberships and active use of the library facilities)

The average age of clients in our library is 40-50 years. These people are mainly quite conservative from the point of their expectations about the format of library performance. They do not place high expectations and demands for the organization of knowledge management processes in the library. New technologies are rarely applied by these people, which reduces the motivation of management for the implementation of new ideas and solutions. At the same time, the low level of young population attraction limits opportunities for the long-term development of our library. Altogether, I am quite skeptical about the perspectives of our organization with the current strategy.

2. What is the percentage of people using your social media accounts/website/application to communicate and use services Vs. those who prefer direct/personal service?

I can say that less than half of our clients utilize social media and other new technologies to communicate with our library. From my personal experience of communication with clients, I can say that only about 40% of them have sufficient experience and knowledge to apply new technologies effectively. For example, only such percentage of clients informed me during private communication that they manage to implement new technologies in everyday life experience. I think that majority of our clients do not need new technologies for productive performance on an everyday basis.

3. How does your organization get feedback and communicates with its clients?

Due to the low level of recognition of new communication channels among our clients, we keep using traditional communication channels to remain in touch with them. Management forces us as librarians to collect regular feedback from our clients to understand mistakes and opportunities for performance improvement. We chat with clients to understand their concerns and ask them to fill small survey for assessment of the quality of service once per month. Unfortunately, it is difficult to guarantee the high efficiency of such a communication channel. The librarian can't pay an equal amount of attention to all visitors regularly.

4. How many new ideas do you get externally annually? (clients)

From the side of clients, we receive approximately 4-5 new ideas regularly on the annual basis. Clients most usually

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share their ideas in live communication with librarians. Most usually, we have to spend a certain amount of time to support clients in the expression of their needs and expectations. Unfortunately, a high share of these ideas never reaches realization. In this context, similar issues that were considered earlier play their role.