

THE RESPONSE OF PUBLIC LIBRARIES TO THE INFORMATIONAL CHALLENGES POSED BY THE COVID-19 PANDEMIC

Kristina Kulikauskienė¹, Laima Naujokienė²

¹*Lithuania*

²*Lithuania*

ABSTRACT

This paper examines the response of public libraries to the informational challenges posed by the COVID-19 pandemic through the analysis of the functions performed by public libraries. The analysis of the scientific literature reveals that among the functions performed by public libraries during the COVID-19 pandemic such as providers of information resources and cultural services, information disseminators, educators and trainers, partners, information community builders, community supporters and internal planners such functions as information disseminators (sharing relevant information), information community builders (collaboration between libraries), community supporters (supporting members of the communities in which libraries operate) and educators and trainers (developing competences needed in crisis situations) are of particular importance to the response to the informational challenges during COVID-19 pandemic.

Keywords: Public Libraries, COVID-19, Informational Challenges, Infodemic

1 INTRODUCTION

During the COVID-19 pandemic, extensive restrictions were placed on the mobility of the population and strict health protection measures were implemented to reduce the spread of the virus. These restrictions affected almost all organisations in both public and private sectors, including public libraries, which had to adapt to the constantly changing conditions by limiting face-to-face services and moving most of their activities into the digital environment (Gann, 2020; Tammaro, 2020; Smith, 2020; Wang, Lund, 2020 Ayeni, Agbaje, Tippler, 2021; Mnzava, Katabalwa, 2021). At the beginning of the pandemic, public libraries started to provide digital services, updated their digital book collections, developed distance learning platforms, increased access to electronic databases, digitized local history materials, organized virtual events and provided remote consultations to citizens (Smith, 2020; Ma, 2020; Panattoni, 2021; Haque et. al, 2022; Ashiq, Jabeen, Mahmood, 2022; Begum, Habiba, 2023; Nadi-Ravandi, Batooli, 2023; Syn, Sinn, Kim, 2023). Researchers, working in the public library field (Gann, 2020; Goddard, 2020; Tammaro, 2020; Smith, 2020; Coghill, Sewell, 2020; Fraser-Arnott, 2020; Kulikauskienė, Šaparnienė, 2022; McMenemy, Robinson Ruthven, 2023) in their studies have focused on the analysis of the activities and functions performed by public libraries during the COVID-19 pandemic, examining the changes in public libraries activities related to book loans, educational activities, virtual events, community support, etc. According to Featherstone, Lyon, Ruffin (2008), Wang, Lund (2020), Ali, Gatiti (2020), Panattoni (2021), Kulikauskienė, Šaparnienė (2022), such functions as providers of information resources and cultural services, information disseminators, educators and trainers, partners, information community builders, community supporters and internal planners that public libraries performed during the COVID-19 pandemic can be identified. These functions enabled public libraries to respond to the challenges posed by the COVID-19 pandemic in meeting the cultural, social, and educational needs of their service users. According to Irwin, Silk (2019), Kulikauskienė, Liukinevičienė (2020), Wang, Lund (2020), Tammaro, (2020), Smith (2020), Panattoni (2021), these functions were particularly important during the COVID-19 pandemic because public libraries

are socially responsible organisations as they provide free and accessible cultural, educational and informational services and focus on meeting the informational needs not only of their service users, but of the members of communities in which they operate as well.

However, Ali, Gatiti (2020), Smith (2020), Wang, Lund (2020), Tammaro (2020), Kulikauskienė, Šaparnienė (2022), McMenemy, Robinson, Ruthven (2023) et al. note that in crisis situations, and especially during the COVID-19 pandemic, when not only health but also informational challenges, such as infodemic, false information spread, etc., were faced, public libraries did not focus enough on combating these challenges. The authors highlight that during COVID-19 pandemic, public libraries did not make sufficient use of their potential to deal with the informational challenges by implementing educational activities, fighting against the infodemic, and supporting the members of the communities in which they operate. These problematic aspects identified in the scientific literature suggest that it is important to identify which of the functions performed by public libraries during COVID-19 pandemic are relevant to overcoming the informational challenges.

In accordance with the stated problematic aspects, the aim of this paper is to identify the functions performed by public libraries that are relevant to respond to the informational challenges posed by the COVID-19 pandemic.

To achieve this aim, the scientific literature in which public libraries functions in crisis situations are investigated is analyzed. During this analysis, the most important functions of public libraries in responding to the informational challenges that were caused by the COVID-19 pandemic are highlighted. Based on the insights provided in the scientific literature, the possibilities for strengthening these functions are envisaged.

2 METHODOLOGY

Research methods used: content analysis and synthesis of scientific literature.

3 RESULTS

3.1. The functions of public libraries during the COVID-19 pandemic

One of the biggest crises that hit the world in recent years is the unprecedented COVID-19 pandemic, which has affected everyone's lives, changing the way people work, learn, and communicate. To reduce the spread of the virus, some of the biggest restrictions on activities and services in history have been imposed, affecting all organisations, including public libraries, leading to changes in the way libraries operate (Bonnet, Sellers, 2019; Wang, Lund, 2020; Smith, 2020; Coghill, Sewell, 2020; Ayeni, Agbaje, Tippler, 2021; Mnzava, Katabalwa, 2021; Haque et. al, 2022; Ashiq, Jabeen, Mahmood, 2022; Begum, Habiba, 2023; Nadi-Ravandi, Batooli, 2023; Syn, Sinn, Kim, 2023; McMenemy, Robinson, Ruthven; 2023). Summarizing the insights of Featherstone, Lyon, Ruffin (2008), Wang, Lund (2020), Craft (2020), Smith (2020), Ali, Gatiti (2020), Panattoni (2021), Kulikauskienė, Šaparnienė (2022), McMenemy, Robinson, Ruthven (2023) it can be said that public libraries during the COVID-19 pandemic have performed such functions as providers of information resources and cultural services, information disseminators, educators and trainers, partners, information community builders, community supporters and internal planners.

Ali, Gatiti (2020), Wang, Lund (2020), Craft (2020), Smith (2020), Goddard (2020), Panattoni (2021), Kulikauskienė, Šaparnienė (2022) note that by performing the above-mentioned functions, public libraries were able to respond to the various challenges posed by the COVID-19 pandemic in meeting the cultural, social, and educational needs of their service users.

According to Ali, Gatiti (2020), Wang, Lund (2020), Craft (2020), Smith (2020), Goddard (2020), Panattoni (2021), Chen, Pan (2021), Ashiq, Jabeen, Mahmood (2022), Begum, Habiba (2023), Nadi-Ravandi, Batooli (2023), Syn, Sinn, Kim (2023) during the COVID-19 pandemic, public libraries implemented the function of *providers of information resources and cultural services* by performing such activities as issuing books, organising events, most of which were carried out remotely by library staff using social networking platforms. Tammaro (2020), Begum, Habiba (2023) notes that the first response of public libraries to the COVID-19 pandemic focused on providing traditional book lending services, eliminating late fees, extending lending times etc. According to the author, the use of digital collections (e. g. e-books and other digital resources) of public libraries increased during the pandemic, and virtual events, exhibitions attracted a great deal of user interest. These activities reflect the function of providers of information resources and cultural services.

During the COVID-19 pandemic, public libraries provided reliable information on the current situation, relevant health issues, disease prevention measures by implementing the function of *information disseminators*. Ali, Gatiti (2020), Smith (2020), Wang, Lund (2020), McMenemy, Robinson, Ruthven (2023) emphasize, that this function has been highlighted not only during COVID-19 pandemic, but also in previous crisis situations, and that public libraries should therefore strengthen their information dissemination activities in crisis periods by providing reliable information. This function is closely related to the need to combat infodemic, fake news and misleading information spread, that has emerged during the COVID-19 pandemic. Public libraries can contribute to these issues by providing links to reliable sources of information, preparing educational and training materials focused on the development of analytical and critical thinking skills, identification of fake news, etc.

Craft (2020), Smith (2020), Wang, Lund (2020), Tammaro (2020) note, that during the COVID-19 pandemic, collaboration between libraries and other organisations is of great importance, highlighting the functions of *partners* and *information community builders*. The pandemic has highlighted the benefits of collaboration among public libraries and other organizations representing local communities, and collaboration among libraries themselves through the dissemination of information, implementation of joint activities, leveraging the potential of other organisations to reach the target audiences etc.

Craft (2020), Smith (2020), Tammaro (2020), Smith (2020), Wang, Lund (2020), McMenemy, Robinson, Ruthven (2023) emphasize the importance of *community supporters'* function in the context of the COVID-19 pandemic. The authors point out that the rise of the internet, social networks and other digital media has expanded the communication possibilities of libraries and enabled them to strengthen their community supporter's function by opening new opportunities to reach a wider and more diverse audience of users through virtual platforms, to communicate with them and to provide support, needed in crisis situations.

However, in crisis situations, it is important for libraries not only to take care of the needs of their service users, but also to ensure the successful performance of their own organisations. Therefore, in the context of the COVID-19 pandemic, the function of *internal planners* is important for public libraries. According to Featherstone, Lyon, Ruffin (2008), Craft (2020), Smith (2020), Goddard (2020), Tolppanen (2021), Decker (2021) this function is necessary to maintain the successful functioning of the library in crisis situations and is related to the organisation of library activities, taking care of staff and their needs.

According to Ali, Gatiti (2020), Gann (2020), Craft (2020), Smith (2020), Panattoni (2021), Chen, Pan (2021), Haque et. al (2022), Ashiq, Jabeen, Mahmood (2022), Begum, Habiba (2023) and others, the context of the COVID-19 pandemic can be distinguished from previous crisis situations such as natural disasters, outbreaks of diseases, etc., by the need for public libraries not only to provide users with traditional services, such as lending of books, providing access to digital resources, organizing events, etc., but also to implement activities oriented towards the overcoming the informational challenges, which were posed by the pandemic.

3.2 The functions of public libraries needed to respond to the informational challenges posed by the COVID-19 pandemic

Ali, Gatiti (2020), Smith (2020), Wang, Lund (2020), Craft (2020), Smith (2020), Panattoni (2021) Chen, Pan (2021), Kulikauskienė, Šaparnienė (2022), McMenemy, Robinson, Ruthven (2023) note that among the functions performed by public libraries during the COVID-19 pandemic such as providers of information resources and cultural services, information disseminators, educators and trainers, partners, information community builders, community supporters and internal planners such functions as information disseminators (sharing relevant information), information community builders (collaboration between libraries), community supporters (supporting members of the communities in which libraries operate) and educators and trainers (developing competences needed in crisis situations) are of particular importance to the response to the informational challenges, such as infodemic, false information and misinformation spread (see Fig. 1).

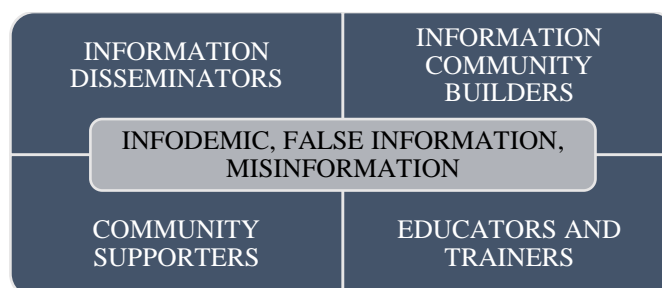


Figure 1. **The functions of public libraries needed to respond to the informational challenges posed by the COVID-19 pandemic.**

Source: Lyon, Ruffin, Featherstone (2008), Wang, Lund (2020), Ali, Gatiti (2020), Craft (2020), Smith (2020), Panattoni (2021), Kulikauskienė, Šaparnienė (2022)

According to Wang, Lund (2020), Craft (2020), Smith (2020), Panattoni (2021), Chen, Pan (2021), McMenemy, Robinson, Ruthven (2023) in the context of the COVID-19 pandemic and informational challenges posed by it, one of the most important functions of public libraries is *information disseminators*. While performing this function, public libraries provide access to reliable sources of information, disseminate trustworthy information, current news, etc. In the context of the COVID-19 pandemic, this function is particularly relevant as the pandemic is accompanied by the infodemic. Infodemic can be defined as information overload, where correct information is accompanied by a large amount of inaccurate and unrealistic news, making it difficult for people to find reliable sources of information (WHO, 2020). Craft (2020), Smith (2020), Sloan (2020), Fraser-Arnott (2020), Panattoni (2021) point out that in the case of the COVID-19 pandemic, information overload is the biggest challenge, with a wide range of information being provided by health care institutions, news portals, academics, social media and others. Also, during the pandemic, there is a particularly high level of fake news and misinformation, accompanying pandemic-related information, because the novelty of the virus has led to a lack of reliable information about it, creating a perfect environment for the spread of speculative news, especially on social networking platforms, where large numbers of people can easily be reached (Bonnet, Sellers, 2019; Naeem, Bhatti, 2020).

Another important function implemented by public libraries is *information community builders* (Wang, Lund, 2020; Craft, 2020; Smith, 2020; Panattoni, 2021; Chen, Pan 2021), which involves public libraries collaboration with other public libraries. It is carried out by libraries sharing information sources and other relevant resources with each other, organizing events, educational activities, etc., oriented towards the fight with infodemic, misinformation and fake news spread.

The analysis of the scientific literature (Matthews, 2020; Ali, Gatiti, 2020; Coghill, Sewell, 2020; McMenemy, Robinson, Ruthven, 2023) revealed, that public libraries act as *community supporters* by addressing the

informational needs of their service users and members of the communities in which they operate. In crisis situations, such as the COVID-19 pandemic, this function involves ensuring support to community members by providing free access to the internet, computer facilities and other sources of information. Matthews (2020) notes that the closure of physical public library facilities due to the restrictions imposed by the COVID-19 pandemic has had a significant impact on the communities in which they operate. While some library activities have been moved to the digital environment (e. g. educational activities, events, etc.) other activities such as free access to computers and the Internet, which in previous crisis situations had helped to support communities, have not been provided.

The last function of public libraries, which according to the Wang, Lund (2020), Craft (2020), Smith (2020), Matthews (2020), Panattoni (2021), Chen, Pan (2021) is important to overcome the informational challenges imposed by the COVID-19 pandemic is *educators and trainers*. In crisis situations, including the COVID-19 pandemic, one of the main functions of public libraries to develop the competences needed by community members to respond to a crisis, such as digital and information literacy competences (Featherstone, Lyon, Ruffin, 2008; Gann, 2019; Aslam, Naveed, Shabbir, 2020; Wang, Lund, 2020). In the context of the COVID-19 pandemic, this function of libraries is very important, because during this period people especially needed sufficient digital competences, because they used computers and the Internet much more than ever before for remote work, learning, purchasing goods, managing financial affairs, communicating with friends and relatives, etc. Gann (2019), Aslam, Naveed, Shabbir (2020), Tammaro (2020) point out that one of the biggest challenges during the COVID-19 pandemic was the lack of digital inclusion, which limited the ability of certain groups in society, lacking sufficient digital competences to engage in social, economic life, participate in lifelong learning activities. According to Real, Bertot, Jaeger (2014), Rutherford et al. (2018), Gann (2019), Gallardo (2019), Gallardo, Beaulieu, Geideman (2020), Strover et al. (2020), key activities of public libraries in the field of digital inclusion include providing access to computers and the Internet, implementing digital competences trainings, and creating digital content (digital products and services). These services are particularly relevant for those belonging to marginalised groups such as the elderly, people with disabilities, people with lower income, etc. For these people, public libraries are places where they can access the Internet free of charge, improve their digital competences, get help and advice if they need it (Smith, 2020; Matthews, 2020). Another important factor related to this function is the development of information literacy competences. According to Naeem, Bhatti (2020), Fraser-Arnott (2020), information literacy can be defined as the ability to locate, analyze, and critically evaluate information, to find reliable sources of information, to identify misleading content, etc. However, Fraser-Arnott (2020) points out that in the context of the COVID-19 pandemic, the concept of information literacy has expanded, taking on additional meanings linked to the need to be knowledgeable about the key aspects of health care, in other words, there is an increased need for information health literacy. According to Gann (2019; 2020), information health literacy is the ability to seek, locate and evaluate health-related information, and to select credible sources of information to make appropriate and health enhancing decisions. The author notes that health information literacy becomes particularly important in health-related crises, such as the COVID-19 pandemic, as it is directly linked to disease prevention. The widespread concern about the pandemic leads people to seek information intensively, most often through social networks. However, they are particularly likely to contain a large amount of unverified, unreliable information, which can lead to unsafe behavior, noncompliance with disease prevention measures, etc. (Fraser-Arnott, 2020).

To summarize this information, it can be stated that public libraries, by performing such functions as information disseminators, information community builders, community supporters and educators and trainers are able to respond to the informational challenges posed by the COVID-19 pandemic. Bonnet, Sellers (2020), Fraser-Arnott (2020) point out that public libraries are one of the most significant organizations that can contribute to the fight against infodemic, misinformation and fake news. According to Wang and Lund (2020), in the face of infodemic, public libraries should help their service users to search, select and evaluate reliable information sources and contribute to their information literacy. These insights might be complemented by Fraser-Arnott (2020) observations that tackling infodemic, misinformation and

fake news are core activities of librarians. Librarians, as information professionals, can contribute to the fight against infodemic, misinformation and fake news by sharing reliable information, sharing links to trustworthy sources, research data, statistical information, and by organizing educational activities focused on digital, information and health literacy competences improvement of their service users, community members in which they operate, and society members as a whole (Ali, Gatiti, 2020; Fraser-Arnott, 2020; Winata, Basuki, 2020).

4 CONCLUSIONS

The analysis of the scientific literature (Ali, Gatiti 2020; Smith, 2020; Wang, Lund, 2020; Craft, 2020; Panattoni, 2021; Chen, Pan, 2021; Kulikauskienė, Šaparnienė, 2022; Haque et. al, 2022; Ashiq, Jabeen, Mahmood, 2022; Begum, Habiba, 2023; Nadi-Ravandi, Batooli, 2023; Syn, Sinn, Kim, 2023; McMenemy, Robinson, Ruthven; 2023) reveals that during the COVID-19 pandemic public libraries performed such functions as providers of information resources and cultural services, information disseminators, educators and trainers, partners, information community builders, community supporters and internal planners. Based on the insights of researchers (Ali, Gatiti, 2020; Smith, 2020; Wang, Lund, 2020; Craft, 2020; Panattoni, 2021; Chen, Pan, 2021 et al.), it can be argued that the context of the COVID-19 pandemic is distinguished from other crisis situations by the need to disseminate reliable information, improve digital and information literacy competences of society members, foster collaboration among organizations and provide support to communities, in which public libraries operate. This highlights the relevance of such public libraries functions as disseminators of information, information community builders, community supporters, and educators and trainers that are particularly important in responding to the informational challenges, such as infodemic, false information and misinformation spread, posed by the COVID-19 pandemic.

Insights for further research. In terms of future research on library activities in crisis situations, there is a need for research on library activities in post-crisis periods. Such studies would help to answer questions relating to the continuity of new activities and services initiated during crisis periods.

REFERENCES

- 1) Ali, M. Y, Gatiti, P. (2020). The COVID-19 (Coronavirus) Pandemic: Reflections on the Roles of Librarians and Information professionals. *Health Information & Libraries Journal*, vol. 37, p. 158–162, <https://doi.org/10.1111/hir.12307>
- 2) Aslam, A., Naveed, A., Shabbir, G. (2020). Is it an Institution, Digital or Social Inclusion That Matters for Inclusive Growth? A Panel Data Analysis. *Quality & Quantity*, <https://doi.org/10.1007/s11135-020-01008-3>
- 3) Ayeni, P., Agbaje, B., Tippler, M. (2021). A Systematic Review of Library Services Provision in Response to COVID-19 Pandemic. *Evidence Based Library and Information Practice*, vol. 16 (3), p. 67-104. <https://doi.org/10.18438/ebliip29902>
- 4) Begum, S.M., Habiba, U. (2023). Are Library Professionals Overcoming the COVID-19 Pandemic Challenges in the Current Reality? *Digital Library Perspectives*, vol. 39 (4) p. 420-443. <https://doi.org/10.1108/DLP-01-2023-0009>
- 5) Bonnet, J. L., Sellers, S. (2019). The COVID-19 Misinformation Challenge: an Asynchronous Approach to Information Literacy. *Internet Reference Services Quarterly*, vol. 24 (1-2), p. 1-8, DOI: 10.1080/10875301.2020.1861161
- 6) Coghill, J. G., Sewell, K. A. (2020). Librarians' Response During COVID-19. *Journal of Electronic Resources in Medical Libraries*, vol. 17 (3-4), p. 92-100, DOI: 10.1080/15424065.2020.1823924
- 7) Craft, A. R. (2020). Remote Work in Library Technical Services: Connecting Historical Perspectives to Realities of the Developing COVID-19 Pandemic. *Serials Review*, vol. 46 (3), p. 227-231, DOI:10.1080/00987913.2020.1806658

- 8) Decker, E. N. (2021). Reaching Academic Library Users During the COVID-19 Pandemic: New and Adapted Approaches in Access Services. *Journal of Access Services*, DOI: 10.1080/15367967.2021.1900740
- 9) Featherstone, R. M., Lyon, B. J., Ruffin, A. B. (2008). Library Roles in Disaster Response: an Oral History project by the National Library of Medicine. *J Med Libr Assoc*, vol. 96 (4), DOI: 10.3163/1536-5050.96.4.009
- 10) Fraser-Arnott, M. (2020). Academic Library COVID-19 Subject Guides. *The Reference Librarian*. DOI: 10.1080/02763877.2020.1862021
- 11) Gallardo, R., Beaulieu, L. B., Geideman, C. (2020). Digital Inclusion and Parity: Implications for Community Development. *Community Development*, vol. 52 (1), p. 4 - 21. doi:10.1080/15575330.2020.1830815.
- 12) Gann, B. (2019). Digital Inclusion and Health in Wales. *Journal of Consumer Health on the Internet*, vol. 23 (2), p. 146-160. doi: 10.1080/15398285.2019.1608499.
- 13) Gann, B. (2020) Combating Digital Health Inequality in the Time of Coronavirus. *Journal of Consumer Health on the Internet*, vol. 24 (3), p. 278-284, DOI: 10.1080/15398285.2020.1791670
- 14) Goddard, J. (2020). Public Libraries Respond to the COVID-19 Pandemic, Creating a New Service Model. *Information Technology and Libraries*, <https://doi.org/10.6017/ital.v39i4.12847>
- 15) Haque, A., Zhang, X., Alam, S., Hasan, N., Any, F.I. (2022). Library Services during COVID-19 Pandemic: A Bibliometric Analysis and knowledge Mapping. *Library Philosophy and Practice (e-journal)*. Access through the internet: <https://digitalcommons.unl.edu/libphilprac/6919>
- 16) Irwin, B., Silk, K. (2019). Changing Stakeholder Expectations of Library Value. *Public Library Quarterly*, vol. 38 (3), p. 320–330.
- 17) Kulikauskienė, K., Liukinevičienė, L. (2020). Socialiai neįgaliosius įtraukiančių bibliotekų teisinė ir administracinė aplinka Lietuvoje. *Informacijos mokslai*, vol. 88, p. 120–141 <https://doi.org/10.15388/Im.2020.88.35>
- 18) Kulikauskienė, K., Šaparnienė, D. (2022). Viešųjų bibliotekų funkcijos COVID-19 pandemijos kontekste: Šiaulių regiono bibliotekų atvejis. *Informacijos mokslai*, vol. 94, p. 8-38. DOI: <https://doi.org/10.15388/Im.2022.93.62>
- 19) Ma, L. F. H. (2020). Academic Library Services during COVID-19: The Experience of CUHK Library, International. *Information & Library Review*, vol. 52 (4), p. 321-324, DOI:10.1080/10572317.2020.1834251
- 20) Matthews, J. R. (2020). COVID-19 and Public Libraries: A Real Paradigm Shift. *Public Library Quarterly*, vol. 39 (5), p. 389-390, DOI: 10.1080/01616846.2020.1796431
- 21) McMenemy, D., Robinson, E., Ruthven, I. (2023). The Impact of COVID-19 Lockdowns on Public Libraries in the UK: Findings from a National Study. *Public Library Quarterly*, vol 42 (1), p. 92-110. DOI: 10.1080/01616846.2022.2058860
- 22) Mnzava, E.E., Katabalwa, A.S. (2021) Library Websites During the COVID-19 Pandemic. *Alexandria: The Journal of National and International Library and Information Issues*, vol. 31 (1-3), p. 12–22. DOI: 10.1177/09557490211058869
- 23) Murtaza A., Farhat J., Khalid M. (2022). Transformation of Libraries During Covid-19 Pandemic: Systematic Review. *The Journal of Academic Librarianship* Volume 48 (4). <https://doi.org/10.1016/j.acalib.2022.102534> pp. 1-10
- 24) Nadi-Ravandi, S., Batooli, Z. (2023). Libraries Respond to the COVID-19 Pandemic: Drawing a Science Map of Published Articles. *Library Hi Tech*, Vol. 41 (1), p. 42-58. <https://doi.org/10.1108/LHT-04-2022-0209>
- 25) Naeem, S. B., Bhatti, R. (2020). The Covid-19 'infodemic': a new front for information professionals. *Health Information & Libraries Journal*, vol. 37, p. 233–239, <https://doi.org/10.1111/hir.12311>
- 26) Panattoni, D. (2021): The New Normal: Public Libraries in Italy Post Covid-19. *International Information & Library Review*, DOI: 10.1080/10572317.2021.1869452
- 27) Real, B., Bertot, J. C., Jaeger, P. T. (2014). Rural Public Libraries and Digital Inclusion: Issues and Challenges. *Information Technology and Libraries*, vol. 33 (1), p. 6–24.
- 28) Rutherford, L., Singleton, A., Derr, A., Merga, M. K. (2018). Do Digital Devices Enhance Teenagers' Recreational Reading Engagement? Issues for Library Policy from a Recent Study in Two

- Australian States. *Public Library Quarterly*, vol. 37 (3), p. 318-340. doi: 10.1080/01616846.2018.1511214.
- 29) Sloan, S. M. (2020). Behind the 'Curve': COVID-19, Infodemic, and Oral History. *The Oral History Review*, vol. 47 (2), p. 193-202, DOI: 10.1080/00940798.2020.1798256
 - 30) Smith, J. (2020). Information in Crisis: Analysing the Future Roles of Public Libraries during and post-COVID-19. *Journal of the Australian Library and Information Association*, vol. 69 (4), p. 422-429. <https://doi.org/10.1080/24750158.2020.1840719>
 - 31) Strover, S. (2019). Public Libraries and 21st Century Digital Equity Goals. *Communication Research and Practice*, vol. 5 (2), p. 188-205. doi: 10.1080/22041451.2019.1601487.
 - 32) Strover, S., Whitacre, B., Rhinesmith, C., Schrubbe, A. (2020). The Digital Inclusion Role of Rural Libraries: Social Inequalities through Space and Place. *Media, Culture & Society*, vol. 42 (2), p. 242–259. doi: 10.1177/0163443719853504.
 - 33) Syn, S. Y., Sinn, D., Kim, S. (2023) Innovative Public Library Services During the COVID-19 Pandemic: Application and Revision of Social Innovation Typology. *Library & Information Science Research*, vol. 45 (3). <https://doi.org/10.1016/j.lisr.2023.101248>
 - 34) Tamaro, A. M. (2020). COVID 19 and Libraries in Italy. *International Information & Library Review*, vol. 52 (3), p. 216-220, DOI: 10.1080/10572317.2020.1785172
 - 35) Tolppanen, B. P. (2021). A Survey of Response of Access Services in Academic Libraries to COVID-19. *Journal of Access Services*, DOI: 10.1080/15367967.2021.1871619
 - 36) Wang, T., Lund, B. (2020). Announcement Information Provided by United States' Public Libraries during the 2020 COVID-19 Pandemic. *Pandemic, Public Library Quarterly*, vol. 39 (4) p. 283-294, DOI: 10.1080/01616846.2020.1764325
 - 37) WHO (2020). Infodemic. Access through the internet: <https://www.who.int/health-topics/infodemic#tab=tab_1>
 - 38) Winata, P.A., Basuki, R.F.S. (2020). New Normal and Library Services in Indonesia: A Case Study of University Libraries. *Digital Library Perspectives*, DOI: 10.1108/DLP-07-2020-0059