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Shared Leadership as the Foundation of University Library Management in Crisis Conditions of Martial Law

Objective. The aim of this publication is to determine an effective approach to managing a university library in crisis conditions of martial law and to identify factors that affect the quality of implementing this approach. Since the beginning of the full-scale invasion, critical changes have taken place in the real working conditions in the front-line areas of Ukraine. The resumption of work at the university and all its departments required the implementation of new management approaches. The main available mode of work, which ensured the safety of all participants in the educational and scientific process, was remote work. **Methods.** An analysis of scientific publications on the research topic was conducted. The report examines an approach based on the concept of shared leadership for organizing the virtual work of the university library. The optimality of this approach in organizing the work of employees in a virtual environment was determined and justified based on empirical methods. **Results.** The use of the shared leadership concept demonstrated the highest effectiveness. Conditions for the effective application of this approach to management using shared leadership are described. **Conclusions.** Therefore, we believe that shared leadership can become the optimal approach to organizing the virtual work of the library in the crisis conditions of martial law. Based on practical experience, two main groups of factors for the successful implementation of shared leadership have been identified.

Keywords: shared leadership; management; remote work; virtual teams; teamwork

Introduction

The problem of effective organisation of work in remote environments has become relevant since the COVID-19 pandemic, but during the pandemic there were opportunities to combine online and offline modes of work, which did not require a radical revision of management methods. The beginning of the full-scale invasion and military operations on the territory of Ukraine made it impossible for organisations to work offline in a number of regions. NTU "KhPI" is still located in the frontline zone. The library of NTU "KhPI" was no exception: the staff was dispersed in different regions of the country and abroad. It became impossible to stay at the workplace.

In addition to the geographical dispersion of employees, the library management faced heterogeneity in the conditions for each employee to do their work. Different time zones, limited internet connection speeds and internet access limits, different hardware and software, computer equipment with different technological capabilities, and inaccessibility of information resources for work. These factors were compounded by critical external circumstances: air raid alerts with the need to stay in a shelter for significant periods; power outages. The moral and psychological state of the employees was extremely low - everyone felt disorganised and broken. All of this became an obstacle to the full performance of official duties and normal communication between the administration and employees, which took place in the form of telephone conversations, messaging and e-mail. Some people lost the technical ability to work. The library staff was forced to switch to remote work. Given the circumstances, the format of communication became less formal. The desire to keep the jobs and continue to work efficiently changed the climate in the team. The part of the team that had the opportunity to continue working remotely became more

open to mutual support, trust in each other and the implementation of common tasks. The common goal turned the team into a virtual team (Loianych, 2018). The virtuality of the team is determined, in particular, by the spatial distance between its members and, accordingly, the use of digital information and communication technologies as the main communication channel (Bell & Kozłowski, 2002).

Modern means of communication provide a sufficient set of tools to ensure that colleagues can achieve maximum mutual understanding in the process of remote work: instant messaging, video conferencing, screen sharing, shared access to the development and editing of documents, etc. For successful communication in the information virtual space, it is necessary to have software and hardware whose technical characteristics meet the requirements of information tools (programs, applications). Unfortunately, the library users found themselves in the same situation as the library staff: most of them had only a smartphone as their main means of communication and learning, so in the first months of the war, messengers were the most popular tools for communicating with users.

It should be noted that the library traditionally performs information, research, and cultural and educational functions in the academic environment. These functions require not only communication between participants in the educational and scientific process, but also access to electronic academic resources. Own electronic resources were available to users. The difficulty arose with setting up remote access to external electronic resources. Access to them is provided on their own information portals according to certain rules. This imposed additional requirements for the organisation of remote work of the university library.

Intuitively, the library administration started work on the formation of groups by area of work with people responsible for specific areas. It was logical to involve employees who had previously worked exclusively offline in remote work. Training and adaptation of these employees was taken over by the area managers.

Shared leadership is defined as a dynamic collaborative process through which influence is distributed among team members to achieve beneficial outcomes for the organisation, thanks to which such teams are characterised by decentralised interaction, collective task performance, mutual support, skill development, and common purpose (Kocolowski, 2010). The concept of shared leadership asserts that influence in an organisation is dynamic and distributed; it is a process in which the group as a whole sets goals and performance expectations, and in which different people can take on leadership roles at any time depending on the needs of the task and the team. One of the beliefs behind shared leadership is that the individuals or groups doing the work know best how to optimise work processes (Krier, 2022).

In a virtual environment, it is easier to create teams within a collective precisely because there is no need to physically move people around (Bell & Kozłowski, 2002). This feature of the virtual environment became one of the factors for introducing the concept of shared leadership, as it became necessary to cross the boundaries of the formal structure - library departments.

Virtual teams are more flexible to changes in composition and functional tasks. This is confirmed by the results of the analysis of the typology of virtual teams and the concepts of their effective management. Typology of virtual teams (Bell & Kozłowski, 2002):

- By time allocation: performing tasks synchronously in real time, performing tasks asynchronously;
- By scope: within or outside organisational structures (departments);
- By life cycle length: temporary and permanent;
- By the roles of participants: fixed roles or full interchangeability of all team members.

Characteristics of a high-performing team include an understanding of common goals among team members, assigning appropriate tasks to each member, understanding roles and

responsibilities within the team, involving all team members in daily activities, using appropriate communication methods and a structured approach, effectively allocating time for discussions, identifying and addressing potential problems within the group in a timely manner, and using effective strategies for decision-making within the team (Stratone, Vătămănescu, Treapăt, Rusu, & Vidu, 2022). Each team member brings knowledge, skills, and perspectives that contribute to the success of the group and the organisation, and members understand that no one can have all the information they need to make informed decisions (Krier, 2022). However, in addition to the positive experiences, virtual collaboration has a number of obstacles to effective interaction between team members and their leaders, such as overcoming communication barriers, opportunities to build trust, or maintaining team cohesion. The concept of shared leadership, in which team members interact to achieve a common goal, is discussed as an approach to addressing leadership challenges in the context of virtual teams (Mayer, Sivatheerthan, Mütze-Niewöhner, & Nitsch, 2023).

When the concept of shared leadership works, employees work together to solve problems and define the work to be done, interact and coordinate actions to achieve goals. People focus on the work itself rather than on the person has the authority to do it (Jackson, 2000).

There are a number of components and factors that affect the success and effectiveness of the application of the shared leadership concept. Shared leadership includes four components: shared task performance, mutual skill development, decentralized interaction among staff, and emotional support (Kocolowski, 2010). Carson J. B., Tesluk P. E., and Marrone J. A. (2007) argued that the common team environment, which consists of three elements: shared purpose, social support, and voice, fosters the development of shared leadership.

Shared leadership in a team is evidenced by the following indicators: the team effectively resolves differences to reach agreement, work is distributed in a way that maximises the unique skills of its members, information about the organisation and its strategy is freely shared, and the team collaborates to identify opportunities to improve productivity and efficiency (Walker, Smither, & Waldman, 2008).

An important issue that cannot be ignored when working remotely is planning to return to offline work after the normalization of the security situation. After all, many organizational changes are taking place: service information is being moved online, communication rules are changing significantly, etc. This implies separate preparation for restoring the offline mode using other work algorithms.

Objective. Thus, the crisis situation required the search for other approaches to library management in order to ensure its full-fledged operation. The choice of approach was significantly influenced by the new working conditions and updated work tasks. In the course of implementation, factors affecting the effectiveness of the application of new approaches were analysed. Each information request is fulfilled in a "librarian-user" pair, so the capabilities of users have also become one of the most important factors. It should be noted that in the first months of the war, most users (students and staff) felt the negative impact of critical external circumstances and had limited technological conditions for requests and communication. The purpose of the article is to define an approach to managing a university library in the crisis conditions of martial law and to identify the factors that affect the quality of implementing this approach.

Methods

To understand the changes in the organisation's management processes that occur when the conditions of its functioning are transformed under the influence of external or internal factors, the method of analysis of scientific publications was used.

The analysis of publications on the best world practices and the latest research in the field of approaches to organising work in a remote mode was carried out in the information and analytical system Scopus.

Based on scientific publications, the concepts of "shared leadership", "virtual teams", "information and communication technologies", "remote management", "teamwork", "remote work" were analysed.

The study used empirical methods to test the effectiveness of the approach.

The reliability of the results is confirmed by the STL report for 2022, which describes changes in the main areas of work and an increase in the amount of work performed remotely ("Zvit pro robotu", 2023). For the first six months of 2023, we have received 4 official acknowledgments in the name of the scientific and technical library from other organizations, which is a good indicator of the quality of work.

Results and Discussion

A significant number of scientific publications describe successful management approaches that have been applied in various situations (Obenauf, 2021; Krier, 2022; Kocolowski, 2010; Noto, Marisca, & Barresi, 2023; Kolesnykova, 2023). We believe that when choosing an approach, it is important to consider the reasons for switching to a remote (or mixed) mode and the expected result. Let us analyse the common reasons for switching to remote work in different teams and what results were expected.

The reasons can be divided into internal (formed within the team) and external (formed outside the team) factors of influence (Fig. 1). Internal factors include:

- The need to establish flexible working hours;
- Improvement of working conditions;
- Ensuring the safety of staff and users;
- Inaccessibility of workplaces;
- The desire to set up/resume work in new external conditions.

External factors include:

- Globalisation and development of international cooperation;
- Measures to promote the organisation's competitiveness;
- Spread of epidemics and pandemics;
- Man-made or natural disasters;
- Martial law and the threat of armed aggression.

Internal and external factors may be critical (e.g., martial law and the threat of armed aggression) or not critical (e.g., the need to establish flexible working hours) in terms of their impact on the organisation.

Critical factors are those that will stop the work process if there is no urgent response to them, while non-critical factors are those that do not require significant changes in the mode and organisation of processes and management to maintain the work. Critical factors prompt the management to implement urgent unconditional changes in the mode of operation and quickly find new approaches to process management in the organisation. The work of Ukrainian universities close to the combat zone has fallen under the influence of critical factors.

The primary expected result in the event of critical factors is the restoration of normal performance indicators, and in the event of non-critical factors - a qualitative improvement in performance indicators. In other words, the response to critical factors should be implemented through immediate and coordinated actions of managers and employees. Differences in the general

algorithm of actions regarding the stages of movement towards the expected performance result when implementing changes in work as a response to different groups of factors are shown in Fig. 1.

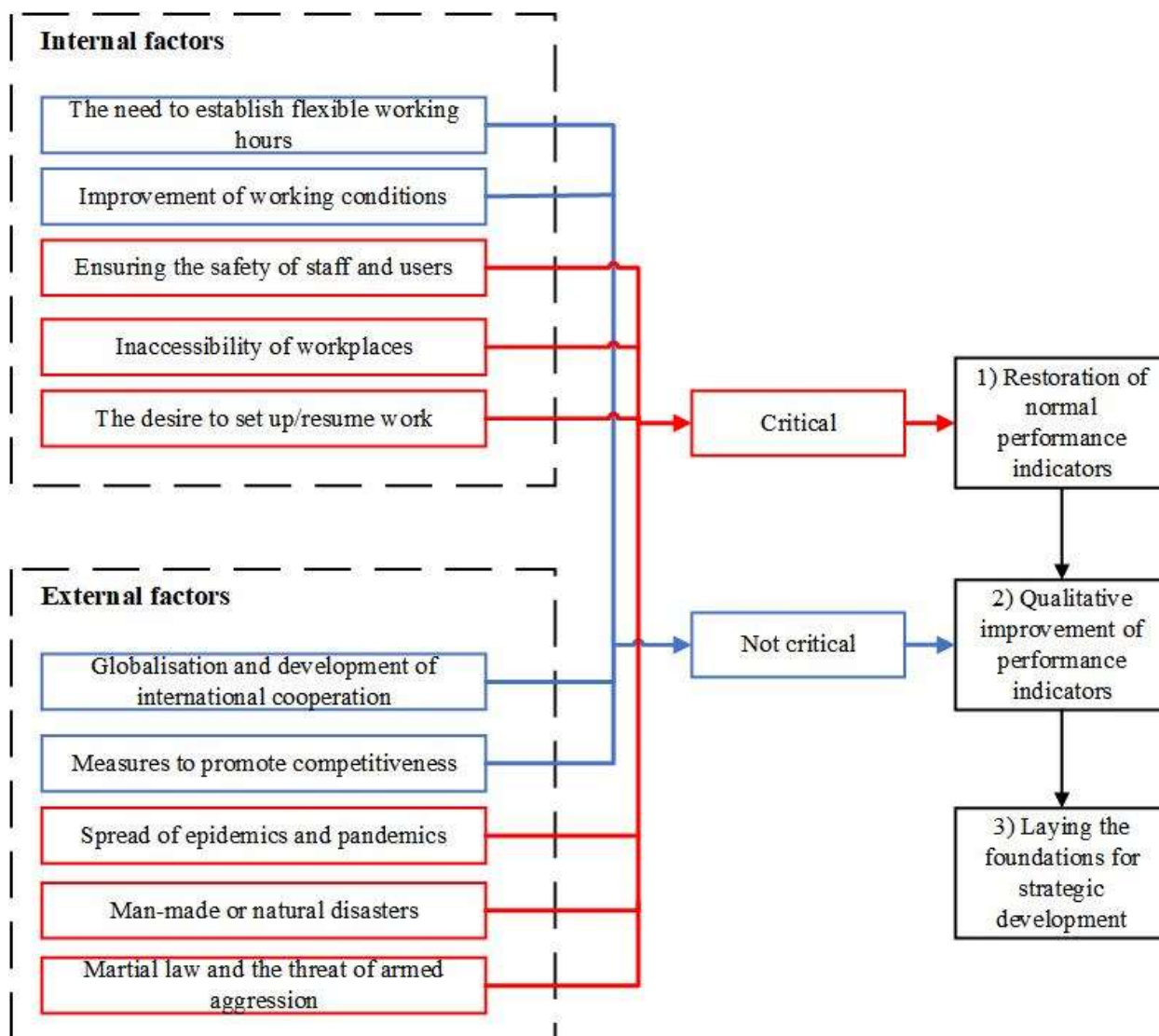


Fig. 1. Proposed Classification of Influence Factors and Algorithm of Actions Regarding the Stages of Movement towards the Expected Result

We consider the following to be the logical sequence of the stages of movement towards the expected result when making changes in work under the influence of critical factors: 1) restoration of normal performance indicators; 2) qualitative improvement of performance indicators; 3) laying the foundations for strategic development.

That is, for the library of NTU "KhPI", the transition to remote work was the only condition under which it was possible to restore the unit to normal performance.

At the initial **first stage**, we identified employees with technological capabilities - hardware and software for communication and access to internal and external information resources of the library. As of April 2022, 58% of employees had such capabilities and 83% of employees as of April 2023. New communication algorithms were developed, priority areas of

work were gradually restored (individual consultations by the most accessible means, development of own information resources, provision of remote access and expansion of the range of external information resources), and those responsible for these areas were appointed.

In order to facilitate and speed up communication, the logical step was to create teams to cover some important areas of work and informally delegate leadership roles in these teams, depending on the tasks and competencies of the team members. It is important for a manager to have trust in staff and to allow people to do their job (Obenauf, 2021).

The manager applied the concept of shared leadership mainly on an intuitive level, driven by the need to organise the library's work in a critical and atypical situation. The transition from the traditional concept of leadership to shared leadership was a key decision. Traditional ideas of leadership focus on the person in a leadership position and the behaviours and actions she or he takes to encourage others to follow the leader's direction and fulfil the leader's vision. Shared leadership empowered staff to make decisions within their area of responsibility, assuming they had a deep understanding of the library's values, enabling them to make effective decisions (Krier, 2022). This ensured the resumption of work in the priority areas in a virtual environment.

At the **second stage**, the areas of work were updated:

- Partial restoration of offline services using the traditional collection;
- Information support for education and science (expansion of the list of available information resources, seminars, scientific and practical conferences);
- Publication support;
- Formation of a virtuous academic environment (training in academic culture and educational activities, formation of an archive of diploma works);
- Participation in publishing activities (support for the work of editorial offices (periodicals and books) and filling the official websites of journals);
- Support of a positive scientific brand of each author of NTU "KhPI";
- Development of international cooperation.

To implement the updated list of tasks, different types of teams were created (Bell & Kozłowski, 2002). Most often, tasks are performed in an asynchronous mode, when everyone performs a personal task according to their own schedule, according to the possibilities of using information and communication technologies. Synchronous mode in real time is used when conducting events in video conferencing mode (meetings, trainings, etc.).

In 2022-2023, new virtual units were established outside the structural units on a permanent basis: the Information and Resource Centre "Without Barriers" (Hlavcheva, Paliei, & Novosolova, 2023) and the Publication Support Centre (Hlavcheva, Odnovolykova, Bykova, & Breslavets, 2023). Employees from various departments are constantly involved in the work of the centres, and, if necessary, other staff members are involved on an ad hoc and temporary basis.

This has made it possible to systematically and comprehensively address a significant number of urgent tasks to provide services to users. In addition, through the combined use of fixed roles or full interchangeability of all team members, it was possible to expand the list of services available to users in parallel. For example, a set of tasks (corresponding to services) was formed on the pages of the virtual units of the Information and Resource Centre "Without Barriers" (Scientific and Technical Library of the National Technical University "Kharkiv Polytechnic Institute", 2022) and the Publication Support Centre (Scientific and Technical Library of the National Technical University "Kharkiv Polytechnic Institute", 2023). It does not matter who the user applies to - the specialists of the Centres fulfil the request by communicating with each other. This combination demonstrates a systematic approach to service provision and provides a synergistic effect. This is confirmed by the study, which notes that the most frequently mentioned

benefit gained from the shared leadership model is the synergy and experience gained from the shared leadership model (Kocolowski, 2010).

The second stage is more extended in time, and the library of NTU "KhPI" is currently at this stage, but it should become the basis for the third stage - the formation of the foundations of strategic development within the new external and internal factors of the organization of library's work. At the same time, it should be borne in mind that returning from full remote work to offline mode can be a rather complicated process and requires special attention and planning (Noto et al., 2023).

An important issue for the successful implementation of any new management approach is the creation of appropriate conditions in the team. The articles (Jackson, 2000; Kocolowski, 2010; Carson et al., 2007; Walker et al., 2008) describe in detail what factors make the implementation successful: overcoming communication barriers, trust, respect, team cohesion, openness, etc. Based on the empirical research, we can identify the main groups of factors for the successful implementation of shared leadership in remote work: moral and psychological (trust and responsibility, mutual support, etc.) and adaptive (no obstacles to mastering and using software and hardware). We consider these groups of factors to be the main ones because remote work is based on the use of information and communication technologies as the main communication channel. Information and communication technologies are not an equivalent substitute for face-to-face communication and may not be sufficient to build trust, mutual understanding, provide and interpret feedback, avoid conflicts, and develop team cohesion (Baralou & Dionysiou, 2021).

Transition and remote work in the crisis conditions of martial law is significantly different from these processes in peacetime. The biggest difference is in the processes that take place in the work team. The danger of martial law motivates employees to help each other and to reach an understanding and agreement. And the extreme conditions associated with power and communication outages require discipline and promote motivation.

Conclusions

Thus, we believe that shared leadership is the best approach to organising the virtual work of a library in the crisis conditions of martial law.

Based on practical experience, we can identify two main groups of factors for the successful implementation of shared leadership: moral-psychological and adaptive. They are equally important when organising remote work in any team in crisis conditions. These characteristics have a qualitative impact on the result of the application of shared leadership. It should be noted that the society is developing and the administration of the scientific and technical library continues to study the best practices in organising the work of the university library, which can be adapted and effectively applied in working with users in the face of dynamic changes in working conditions.

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Спільне лідерство, як основа управління бібліотекою університету в кризових умовах воєнного стану

Мета. Метою публікації є визначення ефективного підходу до управління бібліотекою університету в кризових умовах воєнного стану та виявлення факторів, що впливають на якість застосування цього підходу. З початком повномасштабного вторгнення відбулися критичні зміни в реальних умовах праці на території прифронтової частини України. Відновлення роботи в університеті та всіх підрозділах вимагало впровадження нових підходів в управлінні. Основною доступною формою роботи, яка гарантувала безпеку всім учасникам освітньо-наукового процесу стала дистанційна форма. **Методика.** Проведено аналіз наукових публікацій за темою дослідження. В доповіді розглядається підхід на основі концепції спільного лідерства до організації віртуальної роботи бібліотеки університету. На основі емпіричного методу визначено та обгрунтовано його оптимальність при організації роботи співробітників у віртуальному середовищі. **Результати.** Найбільшу дієвість продемонструвало використання концепції спільного лідерства. Описано умови ефективного застосування підходу до управління з використанням спільного лідерства. **Висновки.** Таким чином, вважаємо, що спільне лідерство може стати оптимальним підходом до організації віртуальної роботи бібліотеки в кризових умовах воєнного стану. На основі практичного досвіду виділено дві основні групи факторів для успішної реалізації спільного лідерства.

Ключові слова: спільне лідерство; управління; дистанційна робота, віртуальні колективи, командна робота

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