

THE CHANGE MANAGEMENT MODEL IN THE IMPLEMENTATION OF TELEWORK IN EDUCATIONAL UNITS

Introduction

The COVID-19 pandemic has profound implications for the way people work across the globe. The coronavirus outbreak has made remote work a necessity, resulting in more people than ever before engaging in teleworking. The suspension of teaching in educational institutions in Poland forced to implement significant changes in the organization of work units. Those changes apply not only to teaching staff, but also to administrative employees working in schools. Many supervisors have faced with difficulties and challenges when managing staff. Often, the assessment of remote work management was not satisfying.

A number of educational institutions have carried out transformational changes (which are significant in terms of scale and scope) related to the implementation of telework. The process of the telework implementation is dynamic, unfolds in stages and, often requires adaptive changes – small, gradual, iterative changes that an organization undertakes to evolve its teleworking processes. Changes occur as a result of internal or external events, herein referred to as factors of change.

This work focuses on managing adaptive changes in the telework of administrative employees in educational units. Its primary goal is to facilitate this management by developing a model for handling adaptive changes in teleworking. This model will link early warning signals of management problems to manageable factors of change and, based on this, develop appropriate recommendations for managers.

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The work covers the following issues:

- theoretical framework related to change management and network thinking methodology,
- the results of exploratory research identifying factors of change and early warning signals of managerial problems,
- the change management model and selected recommendations for managers.

To create this model, exploratory research was conducted with a sample of school principals and managers who supervise administrative staff. In the second part of the research, a survey was carried out among administrative workers. The respondents were asked to identify that are manageable (within the principals' control) and unmanageable (beyond their control), which are associated with managing home-based employees. Another goal of the interviews was to determine early warning signals, and to identify the difficulties and challenges faced by those in charge of educational units. The paper also implements elements of network thinking methodology.

In times of great uncertainty managing has become more demanding. To cope with ambiguity, a change management model was developed. The model facilitates change management, as it presents recommendations and guidelines for managers about how to manage the remote work of public administration officials in selected educational units. The model presents specific recommendations on how to approach change, and what factors decision makers should take into consideration.

1. Theoretical framework

Managing telework employees requires a distinct set of traits, practices, and strategies compared to managing employees located within the same office [Chang, Wang, Yu, 2020; Remote Managers, 2020]. Factors influencing teleworking can be divided into governmental, economic, technical, psychological, and social categories [Kord, Noushiravani, Bahadori, Jahantigh, 2017]. Baruch [2001] presented a classification of four groups of factors influencing effectiveness of telework:

- the job (1) – including the work design with its implied need for technology,
- the organization (2) – including the degree of the supportive nature of the organizational culture for home-working arrangements and the supervisor's acceptance and administration of these arrangements,
- the home/work interface (3) – involving family relations, physical space, and facilities available,
- the individuals (4) – focusing on their attitude towards teleworking and psychosocial profile.

Some of the factors determining the effectiveness of telework are beyond the control of managers (non-managerial factors). While creating the change management

model, at first, it was first necessary to identify manageable (able to be controlled or dealt with without difficulty) and unmanageable factors related to telework management. The manageable factors can be further broken down according to the basic management functions into those related to planning, organizing, leading and controlling. The most important manageable factors are described below. Managing telework employees requires establishing clear rules of cooperation (for instance working hours, schedule etc.). To work effectively, clear goals and responsibilities, performance objectives, and measures should be set up [Illegems, Verbeke, 2004]. One of the crucial elements of remote work management is the ability to motivate employees who are dispersed. It is essential to ensure adequate communication [Kobierska, 2020], provide communication tools, and make sure that all employees are prepared to use them [Mathos, 2015]. It is critical that employees should be trained on how to work effectively [Morley, Cormican, Folan, 2014]. Managers should provide authentic information and knowledge sharing from managers to workers and between work teams. The principles should articulate how their actions are connected to their response to the pandemic, how they make sense given the current context, and how they are tied to the success of employees [Steelcase, 2020]. Coordinating, monitoring and controlling processes become more complex and ambiguous in teleworking teams [Baruch, 2000; Thulin, Vilhelmson, Johansson, 2019]. Effective management of teleworkers requires a result-based management approach [International Labour Organization, 2020] and looking to specific measures of performance [Trziszka, 2019] as control is less possible [Van der Lippe, Lippényi, 2020]. In summary, the described factors are related the telework organization, motivation, and control over home-based administrative workers. Unmanageable factors, which are difficult or impossible to control or deal with, include governmental directives concerning teleworking and regulations concerning the operation of educational units during the pandemic. The operation of educational units has been limited since March 2020. The rules concerning management of staff, school facilities, financial means, and information have undergone complete changes [Sielatycki, 2020]. The recommendations of the Ministry of Education were published at the first stage of limitations imposed on educational units [Journal of Laws of 2020, item 410]. Since then, several regulations of law have been introduced. Another factor influencing the management is a school budget, which is determined in relation to the educational subsidy received by the school authority and is allocated once a year.

Change management is a well-organized framework for managing the people side of change [Hiatt, Creasey, 2012]. It includes practices, processes, and planned activities designed to facilitate and lead organizations from their present state to a desired state [Stouten, Rousseau, De Cremer, 2018]. The goal of change management is not to eliminate resistance, but to anticipate it, proactively plan for it, continuously manage it, and mitigate its consequences [Erwin, Garman, 2010]. The change

management model is a simplified yet effective tool that presents possibilities for change management [Grzelczak, Werner, Daniłowska, 2011]. It constitutes the fourth stage of network thinking methodology [Piekarczyk, Ziemniewicz, 2010] and facilitates an appropriate decision-making process. This tool also allows to properly diagnose analyzed problems. While creating a change management model, it is necessary to determine manageable (under the decision-maker's control) and unmanageable (beyond the decision-maker's control) factors. The model also includes early warning signals that help to monitor and assess effectiveness of the undertaken actions. These signals are vital for the principal, as their observation allows for direct influence on manageable factors. Additionally, studying early warning signals facilitates taking of preventive measures. The essence of change management consists of causative actions, while feedback assists the principal in assessing the existing condition and choosing the course of action [Piekarczyk, Ziemniewicz, 2010]. The change management model will be an essential tool for principals in the decision-making process concerning remote work.

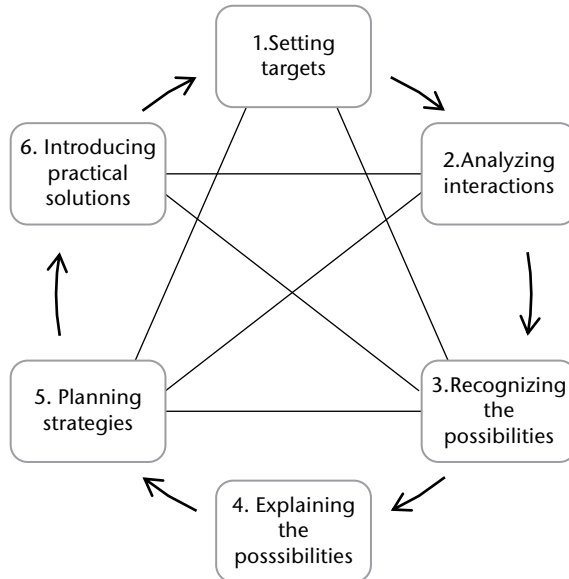
2. Methods

The empirical research consists of two phases. During the first phase, standardized, in-depth interviews were conducted with the principals and managers of the educational units. Participants in these qualitative interviews included principals and managers of 7 secondary schools in Wielkopolska region. The respondents were asked to identify factors of change management and categorize them into manageable and unmanageable factors. They were also asked to identify early warning signals. In the second phase, a survey was carried out among home-based administrative workers. This quantitative research involved 30 employees who were subordinate to the school principals and managers participating in the first part of the research. Both groups of respondents answered questions related to telework, in particular telework organization, motivation, control, communication tools, competencies related to telecommuting, and the advantages and disadvantages of remote work.

In the paper, the network thinking methodology was used. Network thinking methodology (NTM) was developed by Gomez, P., Probst, G. and Ulrich, H. It allows to analyze the studied phenomena in a holistic way. The system is understood as a relationship between various elements present in the network. Network thinking allows approaching the problem from different perspectives, analyzing the factors occurring in the network, and determining the type and strength of interactions of all components.

The methodology consists of the following six phases, which are shown in Figure 1.

Figure 1. Network thinking methodology phases



Source: adapted from: Piekarczyk, Ziemińicz [2010: 48].

Solving problem situations using network thinking methodology requires analysis within individual phases. The essence of modelling a problematic situation lies in establishing system elements that need to be changed. This analysis should determine the type, intensity and timing of interactions between network elements. In terms of interpreting possible developments, it is necessary to specify expectations for the future. Based on these, it is possible to create optimistic, pessimistic and, probable scenarios. Explaining the capabilities of change management involved indicating important factors in the process of implementation, managing their division into controllable and uncontrollable categories, and identifying early warning indicators before the occurrence of any problematic situations, feedback, and anticipatory situations. The phase of planning strategies and actions involves searching for alternative strategies, evaluating them, and making a choice. The practical implementation of solutions should ensure the smooth functioning of the system by taking adequate actions to solve both current and anticipated difficulties [Grzelczak, Werner, Daniłowska, 2011: 21–34].

Network thinking methodology can be useful in managing changes in educational units following the implementation of telework. In the article, the fourth stage of networking thinking methodology, which focuses on explaining the possibilities, was implemented. During this phase, a decision-making process takes place. The identification of manageable factors by principals allows them to directly affect these factors, and the identification of early warning signals enables them to take preventive measures.

3. Results – implementing the network thinking methodology in the process of creating change management model

Developing a concept for managing staff telework during the pandemic is an important task for every employer. In order to do that, the authors of this article have applied a change management model, which visualizes the problem. While creating the model, it was first necessary to categorize all the factors into manageable and unmanageable groups. Table 1 presents the division of factors concerning the management of home-based workers into these two categories: manageable and unmanageable.

Table 1. The division of factors concerning the management of home-based workers into manageable and unmanageable ones

Factors concerning the management of home-based workers	manageable (M)/ unmanageable (UM)
Governmental directives concerning teleworking	UM
Governmental regulations concerning the operation of educational units during the pandemic	UM
Pandemic state	UM
Telework schedule of the staff	M
Rules of teleworking	M
Tools necessary for teleworking	M
Competencies of the staff related to teleworking	M
Working hours of the administrative staff	M
Communication with the administrative staff during the pandemic	M
Relationships between employees	M
Relationships between the principal and employees	M
Training courses for employees	M
Reliability of systems and software	UM
Budget	UM
Sharing knowledge among employees	M
Work atmosphere among the administrative staff	M
Solving problems together with colleagues	M
Work in virtual teams	M
Way of control over the task fulfillment by the administrative staff	M

Source: own study.

After identifying manageable and unmanageable factors, respondents attributed early warning signals to each category. These early warning signals can provide vital information for principals and managers, as their observation allows them to

affect the manageable factors, which remain under control. These signals are presented in Table 2.

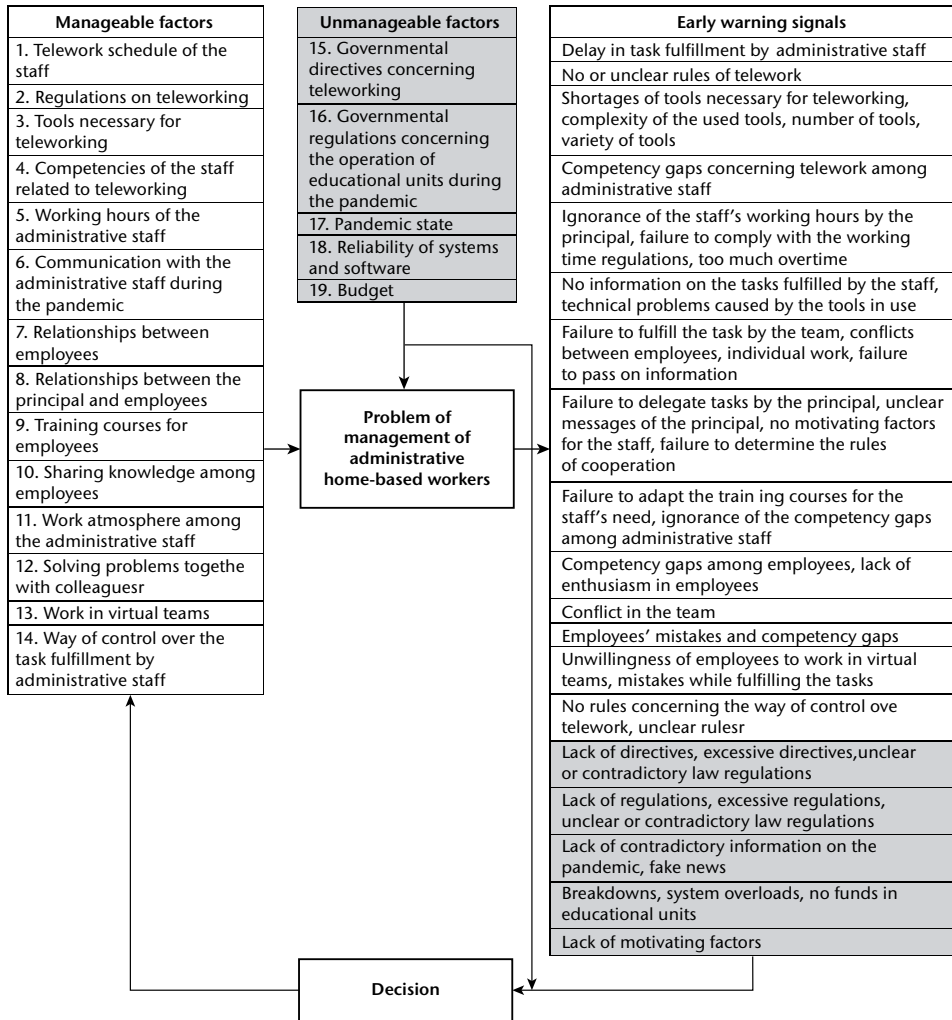
Table 2. Early warning signals

Factors concerning the staff management during home-based work	Early warning signal
Governmental directives concerning teleworking	Lack of directives, excessive directives, unclear or contradictory law regulations
Governmental regulations concerning the operation of educational units during the pandemic	Lack of regulations, excessive regulations, unclear or contradictory law regulations
Pandemic state	Lack of or contradictory information on the pandemic, fake news
Telework schedule of the staff	Delay in task fulfillment by administrative staff
Rules of teleworking	Lack of or unclear rules of telework
Tools necessary for teleworking	Shortages of tools necessary for teleworking, complexity of used tools, number of tools, variety of tools
Competencies of the staff related to teleworking	Competency gaps concerning telework among administrative staff
Working hours of the administrative staff	Ignorance of the staff's working hours by the principal, failure to comply with the working time regulations, too much overtime
Communication with the administrative staff during the pandemic	Lack of information on the tasks fulfilled by the staff, technical problems caused by the tools in use
Relationships between employees	Failure to fulfill the task by the team, conflicts between employees, individual work, failure to pass on information
Relationships between the principal and employees	Failure to delegate tasks by the principal, unclear messages of the principal, lack of motivating factors for the staff, failure to determine the rules of cooperation
Training courses for employees	Failure to adapt the training courses for the staff's need, ignorance of the competency gaps among administrative staff
Budget	No funds for training courses in educational units, for communication tools and software
Reliability of systems and software	Breakdowns, system overloads, no funds in educational units
Sharing knowledge among employees	Competency gaps among employees, lack of enthusiasm in employees
Work atmosphere among the administrative staff	Conflict in the team
Solving problems together with colleagues	Employees' mistakes and competency gaps
Work in virtual teams	Unwillingness of employees to work in virtual teams, mistakes while fulfilling the tasks
Way of control over the task fulfillment by administrative staff	Lack of rules concerning the way of control over telework, unclear rules

Source: own study.

After identifying manageable and unmanageable factors and attributing early warning signals, the change management model was developed. The model is presented in Figure 2.

Figure 2. Change management model



Source: own study.

The selection of early warning signals revealed that they are repetitive across various factors, both manageable and unmanageable. This indicates that the presence of one problem may be attributable to many causes (e.g. the lack of tools necessary for telework may be caused by their shortage on the market or in a given educational

unit). In such cases, it is necessary to investigate more thoroughly the main cause of its appearance.

Studying early warning signals facilitates of the implementation of preventive and corrective measures.

Conclusion

The way principals and managers respond to change can greatly assist their teams in succeeding and can foster a more change-ready culture within their organizations. Supervisors need to learn to anticipate the unexpected and create high-performance environments where people work well together under pressure and can readily adapt to constant changes [Llopis, 2017]. The presented model may help to lead the organization through the change, and implement a better workplace that supports work and workers in new ways.

The creation of the model facilitated further analysis and the formulation of conclusions relating to preventive and corrective actions recommended to managers. Exemplary recommendations are presented in table 3.

Table 3. Conclusions from the change management model

Early warning signals among manageable factors	Grounds for decision – examples	Recommendations for managers (examples): preventive and corrective actions
Delay in task fulfillment by administrative staff	Misfulfillment of the task, failure to meet deadlines, complaints from cooperating units, imposed fines	Elaboration of the task schedule, discussing the consequences of the failure to complete the task on time with an employee, change of their working hours
Lack of or unclear rules of telework	Chaos while fulfilling the tasks, ignorance of roles and tasks, failure to assume the responsibility for the task	Analysis of the staff's needs, elaboration of telework rules, clear explanation of the elaborated rules by the principal, online meetings with the staff
Shortages of tools necessary for teleworking, complexity of the used tools, number of tools, variety of tools	Failure to use tools, insufficient knowledge of tools, fear of using communication tools, negative attitude of the staff to changes	Recognition of the staff's competency gaps concerning communication tools in use, training courses on communication tools for employees, evaluation and assessment of the staff's satisfaction level
Competency gaps concerning telework among administrative staff	Mistakes made by employees while at work, failure to use communication tools, inability to manage time, inability to communicate in a virtual team	Recognition of the staff's competency gaps concerning telework, training courses on telework for employees, evaluation and assessment of the staff's satisfaction level
Conflicts between employees	Bad atmosphere at work, failure to pass on information, antisocial attitude	Recognition of the conflict sources, discussion with employees, confrontation of employees, the role of a mediator, training courses for employees concerning conflict resolution in a team

cont. Table 3

Early warning signals among manageable factors	Grounds for decision – examples	Recommendations for managers (examples): preventive and corrective actions
Lack of motivating factors for employees	Minimalism while fulfilling tasks, low quality of the fulfilled tasks, negative attitude of employees to the fulfilled tasks, high employee turnover	Recognition of factors which are motivating and demotivating for the staff, elaboration and implementation of motivating system for an educational unit
Unwillingness of employees to work in virtual teams	Disagreements in virtual teams, individual fulfillment of the task, low quality of the task fulfilled by the team	Recognition of the reasons for unwillingness to work in a virtual team and attempt to eliminate them, presentation of good practices concerning work in virtual teams, application of motivating elements in teamwork

Source: own study.

Finally, it is worth emphasizing the existence of other groups of factors, beyond those analyzed in this paper, that may influence the decisions of managers. These include:

- a) unmanageable factors directly influencing the effectiveness of teleworking (e.g. family relations, physical space, and facilities available for teleworkers),
- b) individual, contextual factors specific to a given educational unit, such as reserves of human, financial and equipment resources),
- c) factors related to the dynamics of the analyzed management system, such as delays in the early warning subsystem, and both negative and positive feedbacks occurring in the system).

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THE CHANGE MANAGEMENT MODEL IN THE IMPLEMENTATION OF TELEWORK IN EDUCATIONAL UNITS

Abstract

The aim of the article is to create a change management model, which can be used by principals and managers in educational units for supervising administrative staff during teleworking. A change management model constitutes the fourth stage of network thinking methodology and facilitates an appropriate decision-making process.

This paper attempts to implement network thinking methodology in the process of creating a change management model. To achieve this, two – phase research was conducted. The first phase involved in-depth, standardized interviews with principals of educational units in the Wielkopolska region. The second phase consisted of quantitative research, which included a survey of 30 administrative staff members who report to school principals.

As a result of the conducted research, a change management model was created. Manageable and unmanageable factors related to the telework were determined. Based on those factors, early warning signals providing vital information for principals were also identified.

KEYWORDS: CHANGE MANAGEMENT MODEL, TELEWORK, MANAGEABLE AND UNMANAGEABLE FACTORS

JEL CLASSIFICATION CODES: M19, M54, M12

MODEL ZARZĄDZANIA ZMIANĄ W PRACY ZDALNEJ W JEDNOSTKACH EDUKACYJNYCH

Streszczenie

Celem artykułu jest stworzenie modelu zarządzania zmianą, który może być wykorzystany przez dyrektorów i kierowników jednostek edukacyjnych podczas nadzorowania pracowników administracyjnych w czasie telepracy. Model kierowania zmianą stanowi czwartą fazę metodyki myślenia sieciowego i umożliwi przeprowadzenie właściwego procesu decyzyjnego. Niniejszy artykuł stanowi próbę implementacji metodologii myślenia sieciowego w procesie tworzenia modelu zarządzania zmianą. W celu stworzenia modelu przeprowadzono dwuetapowe badania. W pierwszej fazie przeprowadzono pogłębione, standaryzowane wywiady pogłębione z dyrektorami jednostek edukacyjnych w Wielkopolsce. W drugiej fazie przeprowadzono badanie ilościowe (badanie ankietowe) na próbie 30 pracowników administracyjnych podlegających dyrektorom szkół. W wyniku przeprowadzonych badań powstał model zarządzania zmianą. Określono kierowalne (pod kontrolą decydenta) i niekierowalne (poza kontrolą decydenta) czynniki związane z telepracą. Na podstawie tych czynników zidentyfikowano sygnały wczesnego ostrzegania, które dostarczają istotnych informacji dla dyrektorów. Ich obserwacja pozwala bowiem bezpośrednio oddziaływać na kształtowanie się czynników kierowalnych. Identyfikacja wskaźników wczesnego ostrzegania umożliwia podjęcie działań profilaktycznych.

SŁOWA KLUCZOWE: MODEL ZARZĄDZANIA ZMIANĄ, TELEPRACA, KIEROWALNE I NIEKIEROWALNE CZYNNIKI

KODY KLASYFIKACJI JEL: M19, M54, M12

