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## Article

# Teleworking experience of education professionals vs. management staff : challenges following job innovation

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## TELEWORKING EXPERIENCE OF EDUCATION PROFESSIONALS VS. MANAGEMENT STAFF: CHALLENGES FOLLOWING JOB INNOVATION

**Abstract.** *The article deals with the problem of teleworking. Due to the constraints of the pandemic, the education sector has undergone a dramatic change, with teachers and students en masse moved to work from home. In the past, digital solutions have gradually penetrated the education sector, but the pandemic has turned the process into social innovation in the broad sense and performance innovation in the narrow sense. The latter aspect is addressed in this article. The paper aims to reveal the effect of the transition to teleworking on employees in the education sector. Based on the survey results, the study reports experiences of higher education and college professors, secondary schools and vocational schools' teachers and managerial staff in terms of personal well-being, management quality, and performance. The paper is novel in terms of the scope of the study: it analyses the teleworking issue in different educational institutions. In addition, the study compares the experiences of education staff and managers. There is a lack of such research in the scientific literature in the education sector. The research confirms that telecommuting managers experienced less shock and fatigue than professors and teachers. In addition, university professors proved to be the best prepared to work in innovative ways, but they also rated the performance of their managers' management work the worst among all educational institutions. Meanwhile, while teachers in secondary schools rated telework the most negatively, they rated the ability of their leaders to lead the team in extraordinary conditions the best. The research results can be useful for education leaders and policymakers as well as for researchers dealing with the topics of teleworking, teachers' job performance, employee fatigue, and leadership competencies.*

**Keywords:** professors, teachers, higher education, school, managerial staff, working from home, job performance.

**Introduction.** The experience of global teleworking in the education sector during the pandemic was new to academic staff and management employees. Schools, colleges, and universities were unprepared for the sudden and mass shift to virtual work, distance education and information and communication technology-based collaboration. It was natural, therefore, that both academic and managerial staff faced challenges in carrying out their roles in a radically changed environment. At the beginning of the pandemic, the changes were thought to be temporary, but as the pandemic progressed, it became clear that a major shift toward the digitisation of tasks and the hybridisation of communication and teaching (as well as

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learning) in the education sector had taken place. Even after the constraints of the pandemic were over, some educational institutions retained the possibility to work part of the time remotely with students, including a hybrid blended learning approach. Staff and students' experience with educational technology during the pandemic has pushed traditional methods into the past. According to Pichardo et al. (2021), the pandemic, whatever its negative consequences, has had one positive effect: it has encouraged technological innovations in the education sector and encouraged not to be afraid to use them. To respond to crises and perform their roles as effectively as possible, professors and schoolteachers have had to be creative, learn and adapt quickly to develop and apply innovative ways of working and collaborating. Heads of educational institutions were also forced to look at how they do their work. Even though many countries worldwide have recently entered a post-pandemic period, it is necessary to reflect on the lessons learned before the next crisis comes. Thus, this paper aims to reveal the effect of job innovation - the mass transition to teleworking in the education sector. With the research, we highlight challenges of teleworking in educational institutions based on the reported experiences of higher education and college professors, secondary schools and vocational schools' teachers and managerial staff in terms of personal well-being, management quality, and job performance. The novelty of this paper is that it interviews representatives of different institutions in the education system, as well as academic and managerial staff. Such institutional and staff diversity has not yet been found in the literature on telework. The paper, therefore, provides a broader perspective on the experiences of those in the education sector and allows us to make much more informed suggestions for human resource management innovation than would be the case if it were a single-institution level study. The study involved 582 respondents completing a standardised online survey. The survey data was processed in SPSS software.

First, the paper reviews previous research on the pandemic influence on employees in educational institutions, and second, it presents the survey methodology and results. The paper concludes with a discussion, conclusions, and recommendations.

**Literature Review.** According to different studies, teachers experienced a high level of stress by starting to work remotely during the pandemic (Almhdawi et al., 2021; Barquet et al., 2021). Young, less experienced teachers found it easier to cope with the challenges of teleworking because they were supported by their supervisors, colleagues, and psychologists. In contrast, experienced teachers struggled to survive the pandemic because they lacked support (Simut et al., 2021). The main stressors were the increased workload and a teaching style that had not been previously experienced and refined. During the pandemic, teachers felt exhausted, and burnout syndromes were reported (Santos et al., 2021).

Teleworking conditions have impacted the quality of life (Barquet et al., 2021). The negative impact of teleworking on quality of life has been observed in women under 50 years of age in Chile, Italy, Austria, and the United Kingdom, with an increased tendency towards depression in young people (Lizana et al., 2021). Although studies show that female teachers typically have higher occupational satisfaction than men (Alves et al., 2021), women's quality of life during the pandemic was impaired by taking on (sometimes socially imposed) domestic work (Ozamiz-Etxebarria et al., 2021). Thus, work-life balance has suffered. No doubt, from the economic point of view, telework has numerous positive effects like the possibility of knowledge sharing in transdisciplinary teams (Bauters et al., 2021) and new skills development focusing on the results of work (Aslan et al., 2022; Raisiene et al., 2021). This leads to the destruction of obstacles to economic development due to the overall digital transformations in many industries (Yakymova et al., 2022), diminishing expenditures on employees training (Samoliuk et al., 2022), and increased the effectiveness of cooperation in different areas of professional activity, particularly, teamwork in projects (Kostiukevych et al., 2020), etc. However, positive economic outcomes do not always align with psychological impact and quality of life perception.

In terms of work-life balance, according to Lizana and Vega-Fernade (2021), most teachers' families and personal lives have been affected by the impact of the COVID-19 pandemic on their work organisation

and changes in the quality of life have been felt by both genders. Individuals experienced physical and mental health ailments, such as impaired physical functions, body aches and pains, and deterioration in mental health. There was a difference in the tendency to experience stress and anxiety between young and older teachers with younger teachers being more prone to these health impairments, as older teachers had more experience with stressful situations and may have developed emotional resilience (Silva et al., 2021). Xhelilaj and Tartari (2021) argue that a statistically significant correlation exists between teachers' lack of digital competence and the clarity of the tasks they provide to students. In addition, factors such as age, education, interest in technology, place of residence, family members, workload, equipment needed for the job, and support from supervisors/colleagues to cope with the challenges of teleworking influenced teachers' job performance and job satisfaction during the COVID-19 pandemic (Mahmood et al., 2021).

According to Schaffer and Perez (2021), the higher education system was more accepting of distance learning than the secondary education system; distance working required more effort from teachers and negatively impacted their neuropsychological health. Teleworking was stressful for teachers and lecturers, as they had to put more effort into quality education, combine classical teaching methods with interactive ones, and find new tools to maintain student interest (Pressley and Ha, 2021). Meanwhile, vocational schools faced major difficulties organising education due to their orientation towards practical, hands-on occupations such as electricians, cosmetologists, chefs etc. In the short term, vocational schools, like other institutions that had not started the digitalisation process, had to adapt to the situation and quickly look for IT solutions to ensure continuity of education (Lopez Pelaez et al., 2021).

The education sector has also faced leadership challenges. In the UK, for example, school principals as school policymakers have faced the challenges of teleworking and government pressure to ensure the well-being of pupils and staff and the needs of communities in learning (Fotheringham et al., 2021). During the pandemic, school leaders found themselves in a complicated situation - new processes and instructions from the government could change overnight because of COVID-19. For school principals, as leaders, one of their responsibilities is to align the vision of the school community and other stakeholders and improve work processes to achieve a common goal (Delcker and Ifenthaler, 2021). The complexity of the work during the pandemic was also because there were no guidelines on how to act, and actions and anticipation of possible consequences and outcomes needed to be taken there and then (Harris and Jones, 2020). In Lithuania, most school authorities focused on reorganising their work and solving teachers' problems during the first weeks of quarantine. Principals also provided additional support to teachers and pupils who could not use IT (Kaminskiene et al., 2021). Cooperation between heads of schools and teachers and mutual support were also important. School principals could mobilise and empower their teams to work and make the best decisions under new and unusual working conditions. The stark contrast between the measures taken in different countries to mitigate the effects of the pandemic on the education system is highlighted by Ozamiz-Etxebarria et al. (2021). They emphasise the idea that the readiness for, and the response to, a sudden change in the organisation of work varied considerably from country to country.

Most teachers in Sweden reported that their schools did not have a pre-established distance learning strategy in the organisation's documents and that they lacked support from their managers and were left to manage on their own. They had to work with what they had and knew, expanding their experience and acquiring new knowledge (Bergdahl and Nouri, 2021). If older teachers receive timely support from supervisors or colleagues and are equipped with the necessary technical equipment, this leads to higher job satisfaction than younger teachers (Mahmood et al., 2021), but in the case of Sweden, job satisfaction during the pandemic period was a complex topic. In India, more than half of the teachers had been trained in distance education, while more than a third had no such training. The main perceived challenges and problems faced by Indian teachers in distance education are student assessment and unfamiliarity with or inability to use virtual assessment tools (Kamal and Illiyani, 2021). Assessing student learning progress is

the most time-consuming part of teachers' work when working from home (Butron, 2021). In Saudi Arabia, distance education has also been one of the main challenges, with student attendance dropping sharply compared to in-person education (Islam et al., 2021).

A study in Romania by Sarbu et al. (2021) also showed that only one-third of the country's teachers were satisfied with telework. The main barriers teachers identified to online teaching were increased workload, stress, lack of communication with pupils, etc. On the other hand, the authors note that during the pandemic, compared to the pre-pandemic period, teachers became more autonomous and more competent, but at the same time less connected to the organisation, less internally motivated and less productive. According to the data, teleworking, in general, negatively impacts academics' motivation, which may explain the decrease in productivity during the first quarantine (Heiden et al., 2021). As employees interacted less with colleagues, their internal motivation decreased, and thus their productivity dropped out. Thus, based on the diversity of research findings in the academic literature, it would be wrong to generalise and conclude that telework has the same impact on all countries, sectors, and professions. As mentioned above, during the pandemic, education professionals in most countries faced a variety of difficulties in their reorganised work, most notably in the following aspects:

- 1) State of mind;
- 2) Management and cooperation;
- 3) Communication and awareness;
- 4) Working capacity;
- 5) Information technology (IT) application in teleworking.

Differences in the manifestation of difficulties were observed between genders, organisational hierarchies, and organisations. It is appropriate to study a specific population to investigate the impact of teleworking forced by the pandemic from the perspective of academic and managerial staff.

**Methodology and research methods.** A survey was employed as the main instrument of the analysis. Based on the analysis of scientific papers on teleworking, a questionnaire determining how academic and managerial staff in education and higher education evaluate working from home during the pandemic was formed. The participants had to mark their answers in a closed-type questionnaire and were asked to express their opinion on a five-point Likert scale ranging from 1 (Not important at all) to 5 (essential). The questionnaire also included questions about socio-demographic characteristics of respondents, such as gender, position in the institution and type of educational institution. Data collection took in 2021. The questionnaire was hosted on a website [www.manoapklausu.lt](http://www.manoapklausu.lt). A request to share the questionnaire with employees and an invitation to participate in the survey was sent to institutions by taking information from the official system of educational institutions at [www.aikos.smm.lt](http://www.aikos.smm.lt).

In total, the study included 582 academic staff of Lithuanian educational institutions. Based on the data of the Lithuanian Republic department of statistics available in the first quarter of 2021, there were 41614 active academic workers in Lithuania. Accordingly, it was calculated, by applying Paniott's formula, that 396 people needed to be surveyed. Hence, the sample was more than sufficient for this study. The sample comprised 88% (N=510) women and 12% (N=72) of men (Table 1).

It should be noted that most teachers and professors working in Lithuanian educational institutions are women. Consequently, the disproportion of gender does not reduce the validity of the research. Regarding the position held, 25% (N = 145) of participants worked as managers, and 75 % (N = 437) worked only in academic staff positions.

Regarding institutions, the majority (65%) of participants were from general education schools, 16% from universities, 14% were working in vocational schools, and 5% in colleges. The respondents in each group reflected a relative disproportion in the distribution of academics in Lithuanian educational institutions. As shown in Table 1, the survey sample based on the distribution of respondents by their institutional fields is valid.

**Table 1. Socio-demographic characteristics**

Variable		N	%
Gender	Female	510	88
	Male	72	12
Position	Managerial staff	145	25
	Academic staff	437	75
Institution	University	94	16
	College	28	5
	Secondary school	380	65
	Vocational school	80	14
Total		582	100

Sources: developed by the authors.

**Table 2. The distribution of the surveyed by their institutional field cited**

Institutional field of the educational institution	Number of academic staff in the institution	Representative sample in the layer	Number of filled questionnaires
University	7536	71	94
College	2444	24	28
Secondary school	28599	272	380
Vocational school	3035	29	80
Total	41614	396	582

Sources: developed by the authors.

All participants were informed about the purpose of the study. Participation was voluntary, and the respondents were assured of the confidentiality of their responses.

The factor analysis was conducted to reduce the data and find the underlying dimensions of our instrument. Exploratory factor analysis explores the possible underlying structure of a set of interrelated variables without imposing a preconceived structure on the outcomes. The sampling adequacy for factor analysis is verified using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity. Table 3 illustrates that the obtained values of KMO and Bartlett's test were adequate for factor analysis.

**Table 3. KMO and Bartlett's test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,875
Bartlett's Test of Sphericity	Approx. Chi-Square	6140,485
	Df	325
	Sig.	0,000

Sources: developed by the authors.

Items with an eigenvalue greater than one were kept in factors. Five factors were extracted, which together explained 54,01% of the total variance. Factor 1 contained seven items called the state of mind (emotional state). The reliability coefficient Cronbach alpha of this factor is 0,860, which can be considered good. Factor 2, called Management and cooperation, included five items and was considered very reliable based on the Cronbach alpha value ( $\alpha = 0,917$ ). Factor 3 comprised four items named communication and awareness ( $\alpha = 0,776$ ). Factor 4 included four items and was called Working capacity. The internal validity of the latter was considered acceptable ( $\alpha=0,728$ ). Factor 5, called IT application in teleworking, comprised two items. The internal reliability of this factor was 0,602.

Extracted factors were used in further analysis. The Mann-Whitney U test was applied to check whether significant differences in extracted factors exist regarding respondents' positions.

**Table 4. Exploratory factor analysis results**

Factor variables	L	%	$\alpha$
1. State of mind (emotional state)			
I feel emotionally exhausted while working.	0,821	15,544	0,860
I usually feel exhausted and tired after work.	0,779		
Sometimes I am getting sick from work assignments.	0,740		
It is possible that I will begin to distance myself from this work.	0,687		
I talk about my work negatively more and more often.	0,670		
After work, I do not have enough energy for leisure activities.	0,654		
There are days when I feel tired before I even start working.	0,625		
2. Management and cooperation			
Seeing the entirety of goals and tasks in organising work	0,855	15,046	0,917
An effective strategy	0,829		
Thoughtful communication (method, frequency).	0,828		
Employees' roles and responsibilities are discussed with them.	0,825		
Assistance from managers in solving problems.	0,812		
3. Communication and awareness			
I did not lack communication with the manager/employees while working in the organisation before the pandemic.	0,786	9,155	0,776
I do not lack communication with the manager/employees while working remotely.	0,763		
Frequent and regular communication is provided in my organisation.	0,693		
I get enough information related to the task from the people involved.	0,654		
4. Working capacity			
Teleworking negatively affects my emotional well-being.	0,755	8,608	0,728
Teleworking negatively affects my physical health.	0,737		
I look forward to returning to my usual workplace while working remotely.	0,707		
Working from home makes me less productive.	0,649		
5. IT application in teleworking			
There has been a massive change in data digitisation at my workplace.	0,842	5,659	0,602
My competence in using information technology has significantly improved thanks to teleworking.	0,806		

Sources: developed by the authors.

Dunn-Bonferroni post hoc method following a significant Kruskal-Wallis test was used to determine the differences of resulting factors among groups of the educational institution.

**Results.** Firstly, the study aimed to analyse whether the state of mind (in other words, emotional state) of remote working staff in educational institutions depends on their position. It appeared that academic personnel holding managerial positions experienced significantly less emotional issues while teleworking than their colleagues holding non-managerial positions. All items concerning emotional state were significantly different regarding the position held. Non-managerial staff feel more emotionally exhausted while working ( $p=0,033$ ) and after work ( $p=0,002$ ) in comparison to their managers. Professors and teachers are also more prone to getting sick from work assignments ( $p=0,049$ ) and feeling tired before they even start work ( $p=0,021$ ). Furthermore, in comparison to managers, individuals holding a non-managerial position are more negative about their work ( $p=0,019$ ) and have less energy for leisure activities after work ( $p=0,048$ ). Finally, they tend more to distance themselves from their work than teleworkers managers ( $p=0,002$ ).

Next, we analysed the feedback of managers and non-managers on management effectiveness when teleworking. The results revealed that managers rate their actions in terms of Management and cooperation during teleworking significantly better than their employees.

**Table 5. Impact of teleworking on the emotional state of the staff. Responses in managers' and non-managers samples**

Item	Position	N	Mean Rank	Mann-Whitney U	p
I feel emotionally exhausted while working	Managerial	145	266,72	28089,0	<b>0,033</b>
	Non-managerial	437	299,72		
I usually feel exhausted and tired after work.	Managerial	145	255,97	26530,5	<b>0,002</b>
	Non-managerial	437	303,29		
Sometimes I am getting sick from work assignments.	Managerial	145	268,62	28364,5	<b>0,049</b>
	Non-managerial	437	299,09		
It is possible that I will begin to distance myself from this work.	Managerial	145	255,62	26479,5	<b>0,002</b>
	Non-managerial	437	303,41		
I talk about my work negatively more and more often.	Managerial	145	264,45	27760,0	<b>0,019</b>
	Non-managerial	437	300,48		
After work, I do not have enough energy for leisure activities.	Managerial	145	268,60	28362,0	<b>0,048</b>
	Non-managerial	437	299,10		
There are days when I feel tired before I even start working.	Managerial	145	265,70	27941,0	<b>0,021</b>
	Non-managerial	437	300,06		

Sources: developed by the authors.

Such aspects as managers' efforts to create an effective strategy ( $p=0,027$ ) and to see the entirety of goals and tasks in organising work ( $p=0,002$ ) were rated better by managers than by professors and teachers. In addition, when teleworking, managers were more positive about their communication ( $p=0,015$ ). They also rated better their assistance in solving problems ( $p=0,000$ ) and the discussion of roles and responsibilities with their employees ( $p=0,017$ ).

**Table 6. Management and cooperation issues by managers and non-managers**

Item	Position	N	Mean Rank	Mann-Whitney U	p
Seeing the entirety of goals and tasks in organising work.	Managerial	145	324,66	26874,5	0,002
	Non-managerial	437	280,50		
An effective strategy	Managerial	145	315,79	28160,0	0,027
	Non-managerial	437	283,44		
Thoughtful communication (method, frequency).	Managerial	145	317,92	27852,0	0,015
	Non-managerial	437	282,73		
Employees' roles and responsibilities are discussed with them.	Managerial	145	317,22	27952,5	0,017
	Non-managerial	437	282,96		
Assistance from managers in solving problems.	Managerial	145	335,12	25357,5	0,000
	Non-managerial	437	277,03		

Sources: developed by the authors.

Regarding the evaluation of communication and awareness, managers were also more positive in this respect. Managers, more than their workers, are satisfied with the frequency and regularity of communication provided in their organisation ( $p=0,002$ ) and the access to information related to the task from the people involved ( $p=0,018$ ). Analysing the working capacity of managers and their workers during telework, it turned out that managers evaluated this aspect more favourably. Compared to their colleagues in non-managerial positions, managers feel less negative effect of teleworking on their emotional well-being ( $p=0,009$ ) and physical health ( $p=0,032$ ). Furthermore, our analysis aimed to detect whether teleworking dimensions depend on the institution. The data comparison toward Management and cooperation by institutions showed significant differences (Table 9).



**Table 7. Communication and awareness by managers and non-managers**

Item	Position	N	Mean Rank	Mann-Whitney U	p
Frequent and regular communication is provided in my organisation	Managerial	145	352,41	26766,0	<b>0,002</b>
	Non-managerial	437	280,25		
I get enough information related to the task from the people involved	Managerial	145	316,83	28010,0	<b>0,018</b>
	Non-managerial	437	283,44		

Sources: developed by the authors.

**Table 8. Working capacity by managers and non-managers**

Item	Position	N	Mean Rank	Mann-Whitney U	p
Teleworking negatively affects my emotional well-being.	Managerial	145	261,12	27277,0	<b>0,009</b>
	Non-managerial	437	301,58		
Teleworking negatively affects my physical health.	Managerial	145	266,61	28073,5	<b>0,032</b>
	Non-managerial	437	299,76		

Sources: developed by the authors.

It turned out that respondents from secondary schools rate the effectiveness of their managers' strategy in working remotely better than respondents from universities ( $p=0,047$ ). In addition, teachers from secondary schools, compared to professors working at universities, were also more favourable toward the actions of their managers to discuss the functions and responsibilities of their employees ( $p=0,011$ ).

**Table 9. The evaluation of Management and cooperation by institutions**

Item	Position	N	Mean Rank	$\chi^2$	p
Effective strategy	University	94	258,57	9,720	0,021
	College	28	287,75		
	Secondary school	380	305,27		
	Vocational school	80	266,11		
Employees' functions and responsibilities are discussed with them	University	94	251,59	10,838	0,013
	College	28	282,13		
	Secondary school	380	305,29		
	Vocational school	80	276,17		

Sources: developed by the authors.

The evaluation of communication and awareness differs among institutions (Table 10).

**Table 10. The evaluation of communication and awareness by institutions**

Item	Position	N	Mean Rank	$\chi^2$	p
I did not lack communication with the manager/employees while working in the organisation before the pandemic.	University	94	262,50	13,361	0,004
	College	28	214,82		
	Secondary school	380	300,09		
	Vocational school	80	311,63		
I do not lack communication with the manager/employees while working remotely.	University	94	251,91	12,198	0,007
	College	28	249,68		
	Secondary school	380	297,73		
	Vocational school	80	323,07		
Frequent and regular communication is provided in my organisation.	University	94	262,56	11,711	0,008
	College	28	227,48		
	Secondary school	380	304,99		
	Vocational school	80	283,84		

Sources: developed by the authors.

Non-managerial staff from colleges, as compared to secondary schools ( $p=0,023$ ) and vocational schools ( $p=0,021$ ), lacked more communication within the time of the pandemic as compared to the time before the pandemic. Meanwhile, university professors felt the greatest lack of communication with the Management and colleagues during the pandemic. In evaluating communication frequency and regularity, the respondents from secondary schools stood out. Non-managerial staff from the latter institutions, compared to colleges ( $p=0,007$ ) and universities ( $p=0,015$ ), were significantly more satisfied with this aspect of communication in their institution.

Regarding work capacity, universities and secondary schools stood out (Table 11). According to our study results, more than university professors, secondary school teachers experience a negative influence on their emotional well-being when teleworking ( $p=0,021$ ).

In addition, the non-managerial staff in secondary schools ( $p=0,020$ ) and vocational schools, more than in universities, highlighted the wish to return to their usual workplace. Moreover, secondary school teachers were also more negative about their productivity when working remotely than university professors ( $p=0,037$ ).

**Table 11. The evaluation of working capacity by institutions**

Item	Position	N	Mean Rank	$\chi^2$	p
Teleworking negatively affects my emotional well-being.	University	94	250,58	9,279	<b>0,026</b>
	College	28	294,04		
	Secondary school	380	304,56		
	Vocational school	80	276,67		
I look forward to returning to my usual workplace while working remotely.	University	94	256,01	8,852	<b>0,031</b>
	College	28	246,50		
	Secondary school	380	299,64		
	Vocational school	80	310,31		
Working from home makes me less productive.	University	94	255,74	10,237	<b>0,017</b>
	College	28	252,80		
	Secondary school	380	306,34		
	Vocational school	80	276,55		

Sources: developed by the authors.

Finally, regarding IT application in teleworking, secondary schools differed from others. They experienced a significant change in data digitisation at their workplace compared to employees in universities ( $p=0,024$ ) and vocational schools ( $p=0,01$ ).

**Table 12. The evaluation of IT application in teleworking by institutions**

Item	Position	N	Mean Rank	$\chi^2$	p
There has been a significant change in data digitisation at my workplace.	University	94	257,78	16,139	0,001
	College	28	264,54		
	Secondary school	380	310,75		
	Vocational school	80	249,14		
My competence in using information technology has significantly improved thanks to teleworking.	University	94	263,38	18,417	0,000
	College	28	239,75		
	Secondary school	380	311,14		
	Vocational school	80	249,36		

Sources: developed by the authors.

Finally, teachers at secondary schools, more than professors and teachers working in universities ( $p=0,043$ ), colleges ( $p=0,016$ ) and vocational schools ( $p=0,007$ ), have significantly improved their competence in the use of IT thanks to teleworking.

**Conclusions.** Our study revealed that the organisational identity of teleworkers tends to blur. While academic staff were able to increase their focus on maintaining productivity when working from home, the lack of contact with colleagues and poor feedback led to a decline in team spirit and job satisfaction.

According to the study, teleworking affects academic staff and managers differently. Teachers and professors, compared to managers, experienced greater negative effects of teleworking on their physical and emotional health, lack of energy, feelings of irritation, frustration, and exhaustion due to the increased amount of workload, poor workload management, and lack of communication with supervisors and colleagues. In contrast, managerial staff were more positive about their general telework experience and the quality of their job performance compared to how subordinates rated the results of the Management. Managers were satisfied with how they communicated with staff, cooperated and managed work processes. They were also more positive than schoolteachers and professors about the impact of teleworking on health and well-being. In other words, managers did not experience the negative effects of teleworking that academic staff complained about. Double or even triple overlapping workloads can explain complaints of the latter: teachers and professors, on the one hand, had to move to digitised assignments (in most cases, teachers themselves digitised tasks), rethink the process of task verification and assessment, and learn to use remote synchronous means of e-communication. On the other hand, they also teleworked with their managers and were obliged to get tasks and report on their goals in a new way, as well as collaborate with colleagues on new digital platforms.

The over-involvement of academic staff, the prolonged working day, and the lack of communication and managerial support revealed that the innovative job performance provoked by the pandemic had harmed human resources in educational institutions. Relocation from face-to-face contact to telework at home during pandemic time evidenced that education professionals are ready to innovate and apply new teaching methods and technologies, but dramatic changes pose a risk of burning staff in the long run. Innovations for teleworking should come from education professionals themselves or be freely chosen from a pool of opportunities they are familiar with and new ones.

Analysing the situation at the institutional level, we found that schoolteachers had the most negative experience of teleworking and were the most willing to return to face-to-face work with pupils. Teleworking from home hit hardest schoolteachers' work capacity, physical and mental health, and socialisation. On the other hand, school teachers, compared to education professionals in other institutions, rated communication with managers and colleagues higher. However, university professors were the most critical in this latter respect. They rated their productivity in teleworking relatively well but felt marginalised by their managers and isolated within their direct academic work. University professors are the ones who have adapted best to the innovations and constraints (albeit less well than staff in managerial positions in any educational institution). Since we have not investigated the reasons, we can only assume what has made professors better than teachers at coping with the surprises brought by teleworking. It could be that the learning potential of university professors is higher or better developed than that of other educational staff because of the constant obligation to innovate, develop new textbooks and other original study material, carry out research and integrate the results into the teaching process. Teachers at secondary schools and vocational schools, on the other hand, have ready-made methodological support in the form of textbooks, assignment books, etc., and, also due to the age-specific nature of their pupils' learning, they are more focused on their relationships with their pupils than on pedagogical or subject-specific self-development. In another respect, it is schoolteachers who have made the most significant improvements in the use of IT, as without the variety of IT tools, they would not have been able to do the job during the pandemic quarantine (as opposed to, for example, professors, who traditionally have had the option of assigning some of the tasks for students to do completely by themselves).

Based on the results of our study, we recommend that educational institutions go beyond the specific knowledge and skills acquired during the pandemic, further develop telecommunication and e-

collaboration skills, digitalise learning tasks and deepen their knowledge of information communication technologies in general. The better professionals in educational institutions likely become familiar with teleworking, the more productive and comfortable they will feel with remote communication and collaboration. We also recommend that educational institutions' managers seek innovative leadership methods in communication, collaboration, task coordination, etc., to ensure that the manager's mission of planning, organising, coordinating, and controlling is carried out in its best, the employee customised way. Otherwise, in the context of crisis management, the question may arise as to how much managers help or hinder in bringing about needed change in organisations.

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**Досвід дистанційної роботи фахівців освіти та менеджменту: завдання щодо впровадження інновацій**

Стаття присвячена проблемам організації освітнього процесу під час пандемії коронавірус. Пандемія 2019 року спровокувала кардинальні трансформації освітнього сектору. Так, викладачі та студенти масово перейшли на роботу/навчання з дому. Авторами зазначено, що до пандемії інформаційні технології та педагогічні інновації поступово проникали в освітній сектор, але пандемія надала лавиноподібний характер цьому процесу. Метою статті є аналіз впливу переходу на дистанційну роботу/освіту на працівників освітньої сфери. Інформаційною базою дослідження стали результати опитування 41614 працівників освіти в Литовській Республіці. За результатами опитування в дослідженні проаналізовано досвід дистанційної роботи викладачів закладів вищої та коледжів, середніх шкіл та професійно-технічних навчальних закладів, а також управлінського персоналу освітніх закладів різних рівнів. У статті авторами систематизовано проблеми дистанційної роботи в різних навчальних закладах. Крім того, у статті проведено компаративний аналіз досвіду роботи працівників освіти та менеджменту під час пандемії. Результати дослідження засвідчили, що під час віддаленої роботи менеджмент відчував менше шоку та втоми, ніж професори та викладачі. Викладачі закладів вищої освіти виявилися

найкраще підготовленими до інноваційної роботи, але також найгірше серед усіх навчальних закладів оцінили виконання управлінської роботи своїх керівників. При цьому вчителі загальноосвітніх шкіл найбільш негативно оцінили дистанційну роботу, а найкраще – вміння своїх керівників керувати колективом у надзвичайних умовах. Результати дослідження можуть бути корисними керівникам у сфері освіти, а також для дослідників, які досліджують специфіку організації робочого процесу під час пандемії, продуктивності роботи вчителів загальноосвітніх шкіл, їх мотивації та лідерських компетенцій.

**Ключові слова:** професори, викладачі, вища освіта, школа, управлінський персонал, робота вдома, продуктивність.