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MASTER THESIS

DARBO REIKALAVIMŲ IR SKAITMENINIŲ IŠTEKLIŲ ĮTAKA MOKYTOJŲ PERDEGIMUI IR GEROVEI: LYGINAMASIS TARPTAUTINIS TYRIMAS	THE IMPACT OF JOB DEMANDS AND DIGITAL RESOURCES ON TEACHER BURNOUT AND WELL-BEING: AN INTERNATIONAL COMPARATIVE STUDY

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INTRODUCTION

Relevance of the topic

Teaching is widely recognized for its challenging working conditions (Martinsone, Jensen, et al., 2024), which can have significant consequences. The challenges may shed light on the high rates of work pressure, cognitive demands and emotional demands commonly observed within the teaching profession (Varol et al., 2021). These job demands lead to burnout, which negatively affects teachers' psychological and physical health, reduces job satisfaction and increases turnover intentions (Martinsone, Jensen, et al., 2024).

In Lithuania, teacher burnout is a significant issue, as constant educational reforms and declining student numbers intensify teachers' workloads, leading to emotional exhaustion and depersonalization (Žydžiūnaitė & Rutkienė, 2024). Moreover, factors such as inadequate emotional health and the use of ineffective stress coping strategies contribute to the high prevalence of burnout (Emeljanovas et al., 2023). Similarly, burnout contributes to Lithuanian teachers leaving the profession (Martinsone, Rutkienė, et al., 2024).

In Norway, teacher burnout is also a prevalent issue, albeit with some contextual differences. At the national level, teacher burnout is closely linked to job demands, such as emotional strain, perceived lack of control and unsupportive school environments, which directly impact job satisfaction and motivation for teaching (Skaalvik & Skaalvik, 2021a), while additional contributors such as test-based policies and high pupil-teacher ratios along with the pressure to meet standardized performance metrics, further exacerbate emotional exhaustion (Jensen, 2022). Additionally, the lack of adequate coping strategies and professional support intensifies the strain on teachers, leading to reduced well-being (Skaalvik & Skaalvik, 2021b). The importance of addressing burnout as part of a broader effort to enhance teachers' professional well-being globally, emphasizing the need for context-specific solutions, particularly in digitally transforming educational systems is strongly emphasized (Martinsone, Rutkienė, et al., 2024). The global shift toward digitalization in education, accelerated by the COVID-19 pandemic, further underscores the importance of this topic (López González, 2023).

The level of exploration of the topic

The level of exploration of the topic highlights the significant contributions of previous research to understanding teacher burnout and well-being within the framework of the Job Demands-

Resources (JD-R) model. Research examining teachers' experiences highlights how job demands and limited resources impact teachers' intentions to leave the profession, providing valuable insights for cross-cultural contexts like Lithuania and Norway (Martinsone, Rutkienė, et al., 2024). Similarly, the dual role of digital job demands and resources is explored, showing how digitalization as both a job resource and a potential source of new challenges, emphasizing its relevance in shaping teacher burnout and well-being in digitally evolving educational environments (Scholze & Hecker, 2023).

Further expanding the discussion, it is shown that digitalization and automation can strategically reduce job demands, enhance well-being and mitigate burnout (Demerouti, 2022). Adaptations of the JD-R model for effective crisis management underscore its particular relevance for addressing teacher burnout in challenging educational contexts (Demerouti & Bakker, 2023). Studies have shown that excessive job demands, such as emotional exhaustion and cognitive strain, are key predictors of burnout (Bakker & Demerouti, 2017). The JD-R model has been used to examine how organizations can effectively leverage digital resources while managing digital demands (Scholze & Hecker, 2023).

The novelty of the thesis

Although the Job Demands–Resources (JD-R) model is widely applied in research on teacher burnout and well-being, gaps remain in understanding how digitalization as a job resource impacts burnout and well-being, particularly in educational contexts. Most existing studies focus on traditional job resources and are limited to single-country analyses, offering little insight into cross-cultural variations in how job demands and digital resources interact (Martinsone, Jensen, et al., 2024; Viac & Fraser, 2020). Finally, little is known about how these dynamics play out specifically in Lithuania and Norway, two countries with distinct digital maturity levels, work cultures, and educational policies.

This study contributes to the literature by providing a cross-cultural comparison of how job demands and digital resources influence teacher burnout and well-being in Norway and Lithuania. Unlike prior studies, which have predominantly explored traditional job resources, this research emphasizes the role of digitalization as a job resource, analyzing its dual role as both a mitigator of burnout and a promoter of well-being. Additionally, this study integrates mediation analyses to examine the mechanisms through which burnout impacts well-being and evaluates whether digital resources can buffer the negative effects of job demands. By addressing these gaps,

the study offers novel insights into the cultural and systemic factors influencing teachers' professional experiences in digitally transforming educational systems.

The problem of the thesis

To what extent do job demands (work pressure, emotional and cognitive demands) and digitalization as a job resource impact teacher's well-being, and what is the mediating role of burnout in these relationships?

The aim of the thesis

The aim of this study is to assess the relationships between job demands (X1), digital resources (X2), burnout (M) and teacher well-being (Y) in two different contexts of Lithuania and Norway.

Objectives of the thesis

1. To determine the relationships between job demands (work pressure, emotional and cognitive demands), digital job resources, burnout and well-being through an analysis of academic literature.
2. To identify the factors associated with teacher burnout and well-being by analysing the theoretical aspects of job demands, digital job resources, burnout and teacher well-being as discussed in academic literature.
3. To synthesize research findings from academic literature on the topic and distinguish the main models for measuring job demands, digital job resources, burnout and well-being.
4. Through an empirical study conducted in Lithuania and Norway, to establish the relationship between job demands, digital job resources, and teacher well-being, as well as the impact of burnout on these relationships.

Methods

1. Analysis and review of scientific literature.
2. Empirical, quantitative research – based on questionnaire survey.
3. Descriptive statistics, normality testing, regression and mediation analysis.

Structure

This thesis is divided into three parts. The first part focuses on analyzing and comparing theoretical aspects, research findings, and insights from various authors in the scientific literature regarding

teachers' job demands, digital job resources, burnout, and well-being. It provides definitions and the significance of the key elements under investigation, based on the existing academic literature. The factors of job demands and digital job resources that influence teachers' burnout and well-being are identified. Additionally, the literature review highlights studies on the examined elements, identifies relationships between job demands, digital job resources, teacher burnout, and their well-being, formulates hypotheses, and presents the conceptual research model. The second part details the selection of research respondents and the sampling process, the methods used for data collection, the limitations of the research, data analysis techniques, database management, and the assessment of the reliability of the measured constructs. The third part presents a discussion of the research findings on teachers in Lithuania and Norway, their comparison, and the conclusions.

Key words: burnout, well-being, job demands, job resources, digitalization.

1. LITERATURE REVIEW

1.1 Job demands-resources

Job demands are defined as those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs (Demerouti et al., 2001), such as energy, like workload, complex task, and conflicts (Bakker & Demerouti, 2018).

Job resources, on the other hand, are defined as the physical, psychological, social or organizational aspects of a job that: 1. help achieve work goals; 2. alleviate job demands and their associated physiological and psychological costs, and 3. promote personal growth and development (Demerouti et al., 2001). Additionally, job resources are the aspects of work that help employees to deal with job demands and achieve their goals (Bakker & Demerouti, 2018). For example, performance feedback, social support and skill variety are motivating job characteristics that provide meaning to employees, and satisfy employees' basic psychological needs (Bakker & Demerouti, 2018), namely the needs for competence, relatedness, and autonomy (Ryan & Deci, 2000). While job demands and resources typically show a negative correlation, research suggests that in high-status or prestigious occupations, the correlation may be positive, as such employees often have ample job resources at their disposal (Bakker & Demerouti, 2017). The JD-R model believes that for whatever type of job, employees will suffer from job burnout in face of high job requirements and the lack of job resources (Yang et al., 2018).

One of the job demands is work pressure which involves high workloads and tight deadlines that require employees to manage multiple tasks within limited timeframes, contributing to stress and burnout when persistent (Bakker & Demerouti, 2007; Vandenberghe & Huberman, 1999). Work pressure is associated with time pressure (Maas et al., 2021), deadline pressure, and working speed (Buchanan, 2010; Hargreaves, 2003; Skaalvik & Skaalvik, 2015; Smithers & Robinson, 2003), and work intensification (Creagh et al., 2023). In other words, work pressure is interpreted in many ways. For example, that teachers' work has intensified due to heavier workloads, accountability pressures, less support, and fewer resources (Apple, 2004). However, this view treats workload as part of intensity rather than a separate concept. An idea of "heavy hours" better captures the experience of being pulled in multiple directions by competing demands (Beck, 2017), while this is described as a feeling of time being compressed by multiple pressures (Wacjman, 2014).

Another job demand is cognitive demand which refers to the mental effort required to handle complex tasks like decision-making and problem-solving, often leading to fatigue due to sustained attention and information processing (Hakanen et al., 2006; Vandenberghe & Huberman, 1999). Different groups of employees face cognitive demands at work to varying degrees, and are an integral part of the work of employees and thus probably also a significant part of the satisfaction of needs (Meyer & Hünefeld, 2018).

The third job demand is emotional demand which encompass managing emotions during interactions, such as dealing with student behavior or providing support, which can result in emotional exhaustion when not adequately reciprocated (Bakker & Demerouti, 2017; Chang, 2009). Similarly, emotional demands denote those components of the job that require prolonged emotional effort because of extensive contacts with students (Van Vegchel et al., 2004).

According to the JD-R model, every job includes demands as well as resources, and an imbalance between job demands and job resources can lead to employee burnout (Demerouti, Bakker, et al., 2001). The JD-R model outlines two key processes: the health impairment process and the motivational process. The health impairment process explains how job demands deplete employees' mental and physical resources, leading to exhaustion or health problems (Demerouti et al., 2001). More specifically, the process of health impairment suggests that demanding jobs or jobs with chronic job demands, for example, work overload, emotional demands, exhaust employees' mental and physical resources and may therefore lead to the depletion of energy (i.e. a state of exhaustion) and to health problems (Demerouti & Bakker, 2011). Consequently, job demands are positively associated with emotional exhaustion and burnout. Numerous empirical studies have confirmed that job demands are significant negative predictors of employee well-being (Bakker & Demerouti, 2007; Schaufeli & Taris, 2014).

In contrast, the second process in the JD-R model is the motivational process that emphasizes the role of job resources in driving positive outcomes (Bakker & Demerouti, 2018), where job resources enhance employees' ability to achieve their work goals due to their motivational potential (Bakker & Demerouti, 2007). Job resources are believed to predict higher work engagement, lower cynicism, and superior performance due to their motivational potential (Bakker & Demerouti, 2007). In other words, since job resources create meaningfulness and satisfy fundamental human needs, job resources are motivating and contribute positively to work engagement, for instance, a fulfilling state of vigor, dedication, and absorption (Schaufeli & Bakker, 2004). These resources can serve an intrinsic motivational function by fostering personal growth and learning or an extrinsic motivational function by aiding in the achievement of work

goals (Demerouti et al., 2001). Research further supports a direct negative relationship between job resources and burnout (Bakker et al., 2005).

Since its introduction, the Job Demands-Resources (JD-R) model (Demerouti et al., 2001) has significantly influenced research on job characteristics and employee well-being. It has emerged as a prominent heuristic framework for understanding occupational psychological health on a broad scale (Schaufeli & Taris, 2014). The JD-R model suggests that employee well-being depends on the equilibrium between positive and negative aspects of a job. The health impairment process within the JD-R model posits that job demands lead to negative work emotions and reduced well-being via burnout, while the motivational process suggests that job resources foster positive emotions and enhanced performance (Bakker & Demerouti, 2017), which will be studied as well-being in this paper.

High levels of teacher stress, documented across various countries, have prompted researchers to explore aspects of the work and the work environment that may be stressful. As noted, these aspects of the work are termed "stressors" by some researchers and "job demands" by other researchers (Skaalvik & Skaalvik, 2018). This study draws on to these aspects of the work as job demands. Job demands which are identified in teaching include time pressure (also termed work overload), discipline problems (also termed pupil misbehavior), low student motivation, large student diversity, conflicts with colleagues, lack of administrative support, value conflicts, and role ambiguity (Skaalvik & Skaalvik, 2018).

Regarding job resources in teachers profession, there are various factors, including teaching resources, peer support, administrative support (J. Han et al., 2020), autonomy (Collie & Martin, 2017), colleague support (Simbula et al., 2011; Varol et al., 2021), personal resources (mental and emotional competences, defined as degree to which teachers feel mentally and emotionally competent to face job demands) (Prieto et al., 2008), job control, access to information, supervisory support, innovative school climate, social climate (Hakanen et al., 2006), meaningful work (Sciotto et al., 2024). Considering that teachers experience a lot of stress, they are still satisfied and enthusiastic about their work (Simbula et al., 2011). Additionally, one of the effective teaching resources is considered digitalization, which can be used for digital school planning (Passey, 2021).

To sum up, the demands of teachers' work and the resources available to them form the basis for understanding the stress, motivation, and well-being they experience. Demands such as high work pressure, emotional strain, and cognitive demands increase the likelihood of experiencing stress and burnout, as they require constant psychological readiness. Meanwhile, job

resources strengthen teachers' ability to overcome daily challenges, promote engagement, and help maintain professional well-being. The balance between job demands and resources becomes a key factor in determining whether teachers will experience burnout or maintain motivation and effectiveness.

1.2 Digitalization as a resource

Digitalization refers to the process of integrating digital technologies into daily tasks and workflows to enhance efficiency, effectiveness and innovation in professional activities (Parviainen et al., 2017). In other words, digitalization is a broad concept for many diverse applications between increasingly autonomous robots replacing physical work over computer-aided support systems enabling communication and coordination in networks, or replacing routine cognitive tasks with comprehensive artificial intelligence systems steering complex value creation chains (Melzer & Diewald, 2020). Additionally, the concept of digitalization has a dual nature – at the societal level, digitalization is expressed both as a consequence and a premise for why digitalization is important; at the individual and group level, digitalization expresses both challenges and opportunities for learning and development (Munthe et al., 2022).

The term digitalization in secondary education refer to the process of integrating digital technologies into everyday tasks and workflows in order to increase efficiency, effectiveness, and innovation, encompassing both social and economic aspects (Gradillas & Thomas, 2023; Parviainen et al., 2017), however, different related terms are used, such as digitization (e.g., Z. Han et al. (2025); Kasperė & Horbačauskienė (2023); Scholze & Hecker (2023)), Information and Communication Technology (ICT) (e.g., Chen et al. (2022); Day et al. (2010); López González (2023); Paudel (2021)), Communication Technology (CT) (e.g., Boswell & Olson-Buchanan (2007); Hoeven et al. (2016)), telework (e.g., Sardeshmukh et al. (2012)), technology acceptance (e.g., Shamsi et al. (2021)), digital competence (e.g., Caena & Redecker (2019); Cattaneo et al. (2022); Gümüş & Kukul, (2023); Krumsvik (2011); López González (2023); Ng et al. (2023); Ottestad et al. (2014); Skantz-Åberg et al. (2022)), digital literacy (e.g., Díaz-Arce & Loyola-Illescas (2021); López González (2023)), e-learning (e.g., Baber (2023)), online learning (e.g., Baber (2023)), and digital communication (e.g., Benevene et al. (2020); Kuusimäki et al. (2019)) reflecting overlapping but distinct dimensions of technological integration in organizational and educational contexts. It is important to note that there are differences between these terms (e.g. Gradillas & Thomas (2023); Reis et al. (2020)), however they will not be discussed in this study.

The digitalization is integrated into the JD-R model, and it has evoked mixed perceptions. For instance, digitalization is examined as a job resource, specifically highlighting it as a facilitator

of autonomous and flexible work (Scholze & Hecker, 2023). Moreover, information and communication technology (ICT) is discussed as both a demand and a resource, and suggested that it is now time to move from a simple view of technology as a source of stress to a more nuanced view that specifies the conditions under which ICT constitutes a requirement or a resource (Day et al., 2010).

Using JD-R point of view, that job resources reduce job demands impact and create balance between job demands and burnout, digital job resources, such as technological support, effective digital tools, and the ability to use technology independently when planning work, can reduce the risk of burnout (Scholze & Hecker, 2023). Technology can be designed such that it supports local decision making (high job resource), decides for the operator who only has a vigilant role (low job demands), or synthesizes information allowing the operator to make high complexity decisions (high job demands). As technology takes over tasks related to the processing, management, or collection of small objects, parts, or information, humans must perform more complex tasks that require greater intellectual capacity and involve a significant amount of information processing (Demerouti, 2022). Furthermore, technological developments are reshaping the fundamental characteristics of work (Parker & Grote, 2022), and technology is leading to the greatest increase in two work resources: 1. Flexibility in terms of working hours and location; 2. Opportunities for development and learning. Opportunities for improvement are an important resource at work because they motivate and help employees grow. However, technology is becoming increasingly complex and less transparent, hence new skills and knowledge are needed to take advantage of these opportunities (Demerouti, 2022). This means that if an employee lacks the appropriate education or training, the introduction of technology can become a problem rather than an opportunity.

Given that new tasks and routines require new knowledge (Demerouti, 2022; Lundh & Rydstedt, 2016) and that change does not happen automatically, employees face high demands in terms of implementing technology-driven change, which is associated with increased workloads and insecurity. Both of these factors may diminish over time as employees become familiar with the use of technology. Supporting employees in the implementation of technologies (through appropriate training) and their use (through the creation of a help desk) can reduce these change-related demands. However, changing one's work routine and being forced to attend training or request technical assistance is a difficult situation (van Emmerik et al., 2009). Finally, increased demands may be a by-product of technology introduction, as is the case when new tasks and old working patterns do not match (Lundh & Rydstedt, 2016). When it comes to teachers, in the 2006

curriculum reform *Kunnskapsløftet*, the term "digital competence" was replaced by "digital skills," which became one of the five basic skills for teachers (Norge. Kunnskapsdepartementet, 2024).

For teachers, digitalization offers opportunities to enhance lesson planning, deliver content in innovative ways and streamline administrative duties (Tondeur et al., 2017). However, the effective use of digital tools depends on teachers' digital competencies and the availability of adequate training and support (Skantz-Åberg et al., 2022), which is consistent with the idea that technology requires new skills and knowledge (Demerouti, 2022; Lundh & Rydstedt, 2016). Studies indicate that teachers who possess higher levels of digital competence are more likely to integrate technology effectively into their teaching practices, leading to improved student engagement and learning outcomes (Ottestad et al., 2014).

Therefore, technology can have both positive and negative effects on every aspect of work (e.g., workload, flexibility, autonomy, etc.) (Demerouti, 2022). For digitalization to benefit everyone, it must be transformed into a work resource, i.e., a tool that helps employees rather than burdens them. This means that organizations must provide employees with sufficient resources (training, support, appropriate conditions) to enable them to cope with the new demands posed by technology (Demerouti, 2022).

Based on JD-R theory (Bakker & Demerouti, 2017; Demerouti, Bakker, et al., 2001), when job demands are too high, they exhaust employees, reduce their energy, and can harm their health. When job resources are lacking – such as support, time, or skills – motivation declines and employees are unable to achieve their goals. Therefore, if technology increases demands (e.g., the need to work faster, learn new systems), but the organization does not provide sufficient resources (e.g., training or assistance), this can worsen employee well-being, increase fatigue, and reduce engagement at work (Demerouti, 2022).

Teacher's workloads become unmanageable since they have to construct lesson plans using digital tools that some veteran teachers are not truly familiar with (Yuhainis et al., 2024). Meanwhile, teachers with greater confidence in using digital media tend to experience lower levels of exhaustion, one of the three core symptoms of the psychological syndrome known as burnout (Stang-Rabrig et al., 2022). Additionally, teachers' overall autonomy in working with digital tools is important for their autonomy in working with ICT for teaching purposes and using ICT in an educational context (Hatlevik & Hatlevik, 2018). Therefore, it may be inferred that providing sufficient resources for technological needs will be the key to good work results. However, this is not enough (Demerouti, 2022). Having meaningful work is an innate motivator for employees

(Hulshof, Demerouti, & Le Blanc, 2020), which can be threatened by technology, as the principle of "residual" design can lead to "digital Taylorism" (Degryse, 2016).

In summary, technology can increase opportunities for employees to learn and work flexibly, but it also poses challenges – new skills are needed and employers may impose more time constraints. Thus, the impact of technology can be both positive and negative, depending on how it's used. ICT usage is an integral part of teachers' and other professionals' work and can be defined as a resource due to the fact that it assists teachers in completing their work, reduces job demands, and promotes personal growth and development (Day et al., 2010; Hatlevik & Hatlevik, 2018).

1.3 Teacher burnout

Burnout first emerged as a social problem (Maslach & Schaufeli, 1993), and it is increasingly considered as an erosion of a positive psychological state (Schaufeli et al., 2009). Burnout is a psychological syndrome of three aspects – emotional exhaustion, depersonalization, and reduced personal accomplishment – that can occur among individuals who work with other people, for instance, in human services and educational institutions (Maslach et al., 1997). In other words, the staff-client interaction, which requires intense involvement with other people, is centered around the client's current problems (psychological, social, or physical) and is therefore charged with feelings of anger, embarrassment, fear, or despair. For the person who works continuously with people under such circumstances, the chronic stress can be emotionally draining and lead to burnout (Maslach et al., 1997). Similarly, burnout reflects an increased level of emotional exhaustion which normally deteriorates the quality of care and services that an employee provides to his/her stakeholders (Adil & Baig, 2018). Moreover, burnout can be defined as "a work-related state of exhaustion that occurs among employees, which is characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing. These four core dimensions of burnout are accompanied by depressed mood as well as by non-specific psychological and psychosomatic complaints" (Schaufeli et al., 2017). Thus, burnout is the result of long-term, chronic stress at work, especially in professions where employees constantly interact with other people and have to be emotionally involved (e.g., teachers). The essence of burnout is emotional exhaustion and a negative impact on professional activity and well-being. In other words, burnout is considered to be the result of a loss of psychological balance, when an employee's resources are no longer sufficient to cope with the demands of work.

One of the three dimensions of burnout is an emotional exhaustion, which appears to be the central variable in the burnout process (Bakker et al., 2008), and a part of the different definitions of burnout (Shirom, 2005). Emotional exhaustion refers to a general feeling of extreme chronic fatigue, caused by continuous exposure to demanding working conditions (Bakker et al., 2008). Feelings of exhaustion arise from stressful working conditions, whereby employees are repeatedly confronted with high job demands (such as work pressure or high emotional demands) (Bakker et al., 2008), hence, exhaustion denotes feeling drained of energy, feeling worn out and depleted (Skaalvik & Skaalvik, 2017b). As emotional resources are depleted, workers feel they are no longer able to give themselves at a psychological level (Maslach et al., 1997). Increasing job demands while decreasing job resources leads to emotional exhaustion (Adil & Baig, 2018).

Within the teaching profession, the field is at high risk of burnout due to long-term stressful events that may occur during a professional career (Angelini et al., 2024; Brady et al., 2023; Cacciamani et al., 2022; Fiorilli et al., 2017). In support of this, there is identified a number of stress factors in the teaching profession. Some of these are specific to the teaching profession, while others can be observed in many professions. Among the stress factors that many researchers have identified among teachers, can be mentioned: workload and time pressure, discipline problems, unclear role expectations, lack of influence on decisions at school level, lack of recognition, low pay and conflicts with colleagues, school management or parents (Betoret, 2009; Fernet et al., 2012; R. M. Klassen & Ming, 2011; Skaalvik & Skaalvik, 2011).

JD-R model is as a guiding framework to analyze burnout (e.g., Bakker et al. (2008)). As evidence for the stress factors, and keeping in mind that feelings of exhaustion arise from stressful working conditions (Bakker et al., 2008), other research on teachers shows that persistent stress, which is the first stage of development of burnout (Schaufeli & Enzmann, 1998), has a number of adverse consequences (stress reactions), including lower expectations of mastering tasks (mastery expectations), lower job satisfaction, less commitment, burnout and increased motivation to leave the job (Collie et al., 2012; R. Klassen et al., 2013; Skaalvik & Skaalvik, 2011). Additionally, stress among teachers is defined as negative or unpleasant emotions caused by aspects of their work as teachers (Collie et al., 2012), for instance, teachers face specific professional demands (Nasvytienė & Balčaitytė, 2009; Stočkus, 2014), and in order to meet these requirements, teachers must change in line with changes in the educational environment (Navaitienė & Danilovienė, 2017). It flows that one of the reasons why so many teachers leave the profession is that it is one of the professions with the highest levels of stress and burnout (e.g. Liu & Onwuegbuzie, 2012;

Stoeber & Rennert, 2008). In explaining the source of this stress, Schaufeli & Enzmann (1998) suggests that it stems from an imbalance between job demands and job resources.

Most teachers cope successfully with job related stress, for example through active problem solving, social and emotional support from colleagues, restructuring the teaching process, collaborating with parents, or adjusting their pedagogical methods (Skaalvik & Skaalvik, 2009a), as teaching is a helping profession based on caring (i.e., toward students) and collaborative relationships (i.e., with colleagues and school leaders) (Angelini et al., 2024). However, burnout may be the final stage of an unsuccessful coping process with chronic stress (Jennett et al., 2003).

In the context of teachers in Lithuania, teacher burnout is influenced by specific contextual factors, including constant educational reforms, a shrinking student population and the challenges of working with students from social risk families or those left behind by emigrant parents and children from families experiencing economic deprivation (Žydžiūnaitė & Rutkienė, 2024). Teachers in Lithuania also face low salaries, large class sizes and long working hours, which contribute to job dissatisfaction. Emotional difficulties, such as challenging relationships with colleagues, lack of autonomy and dealing with student violence, further intensify the risk of burnout. These stressors often lead to "oversaturation" of social contacts and a sense of professional insecurity, highlighting the need for targeted support to improve teacher well-being (Žydžiūnaitė & Rutkienė, 2024). As for teachers in Norway, burnout among teachers is similarly prevalent, albeit with different contextual drivers. High turnover rates indicate significant levels of stress and burnout, driven by factors such as micromanagement, growing reliance on team collaboration and a perceived lack of value alignment within schools (Skaalvik & Skaalvik, 2018). Norwegian teachers often face high workloads and limited resources, which are compounded by systemic challenges like test-based policies and pupil-teacher ratios that strain their ability to meet professional expectations (Jensen, 2022; Martinsone, Jensen, et al., 2024).

In conclusion, burnout affects emotion regulation, cognitive processes, psychology, and psychosomatic outcomes (Angelini et al., 2024). teachers affected by burnout may exhibit cognitive impairment, such as memory deficits and reduced attentional resources (Deligkaris et al., 2014). Studies in different cultures show that measures of teacher burnout predict both subjective and objective health as well as teachers' motivation and job satisfaction (Skaalvik & Skaalvik, 2010). The most clear-cut result from previous research on teachers' working conditions is that they are stressful, that a great many teachers feel exhausted by their work and that some of them develop tendencies towards burnout (Skaalvik & Skaalvik, 2017b).

1.4 Teacher well-being

Well-being is a subjective feeling (Dodge et al., 2012). Attempts have been made to measure well-being as satisfaction with various aspects of work, such as satisfaction with physical conditions or with the social environment in the workplace. Well-being is also defined as "a combination of feeling good and functioning effectively" (Huppert & So, 2013). Many attempts at expressing well-being's nature have focused purely on dimensions of well-being, rather than on definition, which makes it difficult to capture and describe well-being (Dodge et al., 2012). Similarly, the challenge in capturing well-being stems from connecting well-being to these abstract concepts, making it challenging to provide a clear and comprehensive explanation of the phenomenon that goes beyond a straightforward definition (Martinsone, Jensen, et al., 2024). Moreover, regarding education area, the problem with such a measure of well-being is that the factors that create or reduce well-being can vary from teacher to teacher (Skaalvik & Skaalvik, 2009). Furthermore, well-being was also conceptualized as a multi-dimensional construct, involving personal and professional domains that interact to fuel an underlying "wellbeing reservoir" (Prentice et al., 2023).

According to the WHO (2021), well-being is a positive state of "complete physical, mental and social well-being," not just the absence of disease. Furthermore, in discussions of technology and teacher well-being, the self-determination theory is used as a conceptual framework (Passey, 2021; Ryan & Deci, 2000), which identified three important needs – competence, relatedness and autonomy – that "appear to be essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being" (Ryan & Deci, 2000). These two perceptions of well-being are holistic, emphasizing the overall well-being of the individual, highlighting a positive state, and viewing well-being as a dynamic process related to human growth and physical and social functioning.

Regarding educators, teacher well-being (TWB) has proven difficult to elucidate, with many attempts framing their well-being as contrary to experiences of burnout and stress (Fox, 2021). Research also indicates that TWB can be affected by psychological, social and physical sources (Passey, 2021), across all three competence of well-being: physical, mental, and social (WHO, 2021), and across all three needs of competence, relatedness and autonomy (Passey, 2021; Ryan & Deci, 2000). Furthermore, there is a strict relationship between work engagement and subjective well-being: the more teachers are engaged in their work, the more they are satisfied with their lives, which, in turn, improves subjective well-being (Angelini et al., 2024).

In Lithuania, teachers face significant challenges that negatively impact their well-being at work. Recent developments, such as curriculum renewal and the upcoming full inclusion of pupils with disabilities and linguistic multiplicity, have increased workload and stress levels among educators. These changes, coupled with the effects of the COVID-19 pandemic and a turbulent geopolitical environment, have led to a notable rise in teacher turnover and shortages in specific subject areas (Bagdžiūnienė et al., 2023). While teaching can provide job satisfaction through the responsibility of shaping children's education and well-being, it also often leaves educators physically and emotionally drained. Prolonged exposure to stress depletes emotional resources, potentially resulting in complete exhaustion of physical and mental strength, which significantly affects motivation, behavior and overall well-being (Žydžiūnaitė & Rutkienė, 2024). A lack of well-being among Lithuanian teachers is also linked to insufficient resources and heavy workloads, which contribute to stress and burnout. Teachers rely on coping mechanisms such as planful problem-solving and accepting responsibility to manage stress effectively (Kepalaite, 2013). However, negative coping strategies, like self-isolation, exacerbate distress and reduce emotional resilience (Emeljanovas et al., 2023). Building a positive work environment through collaboration with colleagues, school leadership and parents has the potential to improve professional well-being (Žydžiūnaitė & Rutkienė, 2024). Despite this, the current challenges often overshadow such opportunities, leaving teachers with limited support and reduced emotional health.

Norwegian teachers face unique challenges to their well-being despite a strong emphasis on worker health and safety in national policies, such as the Working Environment Act, which promotes health, job satisfaction and the prevention of work-related illnesses (Martinsone, Jensen, et al., 2024). While Norwegian work culture is built on democratic principles and collective decision-making, systemic issues persist. Stressful work environments, often exacerbated by discipline problems in classrooms, contribute to teacher turnover. Teachers who report frequent discipline challenges also express stronger intentions to leave their jobs, underscoring the negative impact of these stressors on well-being (Jensen, 2022). Moreover, changes in educational policies and increasing school sizes have further strained the work environment, affecting both individual and organizational well-being (Burns & Machin, 2013; Kallestad, 2010). Although organizational support and collaborative workplace climates are emphasized, Norwegian teachers still experience high levels of stress and emotional exhaustion (Skaalvik and Skaalvik, 2021). These findings suggest that supportive leadership and effective coping mechanisms are critical to maintaining teacher well-being. However, periods of economic rationalization and a growing student

population have amplified pressures on schools, reducing the effectiveness of well-being initiatives (Burns & Machin, 2013).

Although much of the existing work focuses on teacher stress and its consequences, it also shows that the vast majority of teachers enjoy their work and are committed to teaching. In a survey of 2,249 Norwegian teachers, for example, 77 per cent of teachers said they enjoyed their work, while only 4 per cent said they did not enjoy it (Skaalvik & Skaalvik, 2009b). In an interview survey of 36 teachers, five main categories of motivational factors or well-being factors were identified (Skaalvik & Skaalvik, 2012): 1. teaching itself, interacting with students and seeing them learn and develop; 2. a sense of mastery, which is also linked to seeing students learn and be motivated to do schoolwork; 3. variety in the work; 4. autonomy, and 5. collaboration with colleagues. Thus, the results of the teacher research may seem paradoxical – they indicate both high job satisfaction and high stress levels (Skaalvik & Skaalvik, 2009b).

1.5 Impact of JD-R and digitalization on burnout

A positive link between job demands and job burnout is well documented in a variety of occupations (Martinussen et al., 2007; Smoktunowicz et al., 2015). Job demands can turn into stressors when high effort is needed to maintain an expected performance level, leading to negative outcomes (Hakanen et al., 2006) such as burnout, and may affect employee well-being (Schaufeli & Taris, 2014). The burnout is recognized as a social problem (Schaufeli et al., 2009) and a syndrome of emotional exhaustion (Maslach et al., 1997) that is described as the result of intense physical, emotional, and cognitive strain, often arising as a long-term effect of extended exposure to specific demands (Demerouti, Nachreiner, et al., 2001). Thus, regarding JD-R, one of the drivers of burnout is the ongoing imbalance between job demands and resources (Bakker & Demerouti, 2007). Job demands can be categorized into work pressure, cognitive demands and emotional demands (Bakker et al., 2008; Bakker & Demerouti, 2007).

Work pressure refers to the demanding elements of the job, including the volume of tasks and the speed at which work must be completed (X. Zhang et al., 2021). Teachers face such demanding elements in their work. With educational reforms and the passage of time, the sources of work pressure for primary and secondary school teachers are evolving. Teachers are required to adapt their teaching content and methods to align with national policy requirements, which inevitably increase their workload (K. Z. Li et al., 2024), and burnout at the same time.

Cognitive demands refer to the mental efforts required to handle multiple tasks or deal with interruptions during work. Teachers who experience elevated cognitive demands – particularly those working in primary and secondary schools – reported significantly greater

difficulties in psychologically detaching from work during non-working hours. The inability to "switch off" mentally after work is a key issue linked to burnout (Varol et al., 2021).

Furthermore, German teachers who experienced increased emotional demands are at higher risk of reporting difficulties in psychologically detaching from work during non-work time (Varol et al., 2021). This suggests that emotional demands are a significant risk factor. Higher content-related emotional demands are linked to greater levels of exhaustion (Vammen et al., 2019). The emotional demands that naturally come with teaching often trigger negative feelings that teachers are expected to suppress. As a result, they face greater emotional dissonance (Cuadrado et al., 2024), which contributes to increased burnout and decreased well-being.

As demands rise – such as an increase in service recipients with more complex needs – available resources often fail to keep up, exacerbating the strain on employees (Schaufeli et al., 2009). In particular, the process of job demands suggests that excessive job demands deplete employees' energy and resilience, leading to strain and ultimately resulting in negative outcomes such as burnout and reduced well-being (Bakker, A. B., Demerouti, E., & Verbeke, 2004; Hakanen et al., 2006; Xanthopoulou et al., 2025), while the job resources make the opposite impact. Building on this, digitalization expands the JD-R model (e.g. Day et al., 2010; Z. Han et al., 2025; Scholze & Hecker, 2024). The established Job Demands-Resources model offers a pertinent theoretical framework for gaining fresh insights into alterations in job demands and resources caused by digitization (Scholze & Hecker, 2024). Workplace digitization have led to significant changes in the way employees work, enabling them to access information and utilize social networks more efficiently, thereby increasing productivity, reducing work costs, and creating more value (Z. Han et al., 2025). On the other hand, there is also argued that with digitization continuing to reshape work environments, organizations must confront the challenges of comprehending its "bright side" and "dark side" effects (Scholze & Hecker, 2024).

Regarding those "dark sides" that can impact job demands, Scholze & Hecker (2024) draw on sources from other researchers and argues that when considering the influence of digitization on job demand, employees' experiences excessive technology dependence, increased workloads, changes in communication, Digital Information and Communication Technologies (DICT)-related challenges and interruptions, employee monitoring, intensified workloads, constant availability, and work life intrusions. The aspects from the "bright side" of digitization that influence job resources are the use of Digital Information and Communication Technologies (DICT) that increase flexibility, job autonomy, work-life balance, the promotion of social networks, private work life support, effective communication, innovative ways of collaboration, and flexible

working arrangements (Scholze & Hecker, 2024). Furthermore, digital jobs often provide continuous learning and skills development opportunities, contributing to personal growth and fulfillment (Soga et al., 2022). In the context of education and professional development opportunities for teachers, their professional development is important internationally, especially in a world where teachers are required to become 'high-level knowledge workers' (Ventista & Brown, 2023). Training aimed at improving ICT problem-solving skills helped reduce technological anxiety among secondary school teachers (Muñoz et al., 2017). Teachers with greater confidence in using digital media tend to experience lower levels of exhaustion, one of the three core symptoms of the psychological syndrome known as burnout (Stang-Rabrig et al., 2022). Returning to the earlier point, these "bright side" aspects of digitization can shift the balance between job demands and job resources (Ruiner et al., 2023). At the same time, research shows that for these positive effects to occur, employees must accept the technology, and acceptance of technology is determined by perceived usefulness and ease of use (Shamsi et al., 2021).

Digitalization in education represents a transformative shift in how teaching and learning processes are conducted, leveraging digital tools to enhance both pedagogy and administration. As educational institutions increasingly adopt digital technologies, classrooms evolve from traditional settings to dynamic learning environments (Tondeur et al., 2017). The implementation of digital tools such as interactive whiteboards, online assessment platforms and virtual learning environments facilitates personalized learning experiences and broadens access to educational resources (Selwyn, 2013). Moreover, these digital resources provide significant job support for teachers, enabling them to plan lessons, communicate with students and parents, manage assessments and access professional development opportunities (Tondeur et al., 2017). Such resources not only streamline work processes but also have the potential to alleviate job demands by reducing workload and increasing task efficiency (Henriette et al., 2015). In other words, digitalization supports teachers by streamlining administrative tasks, facilitating communication and providing access to digital learning resources (Selwyn, 2013). Digital tools help reduce cognitive and emotional demands by automating routine tasks and enhancing the learning experience for students (Bakker & Demerouti, 2017; Selwyn, 2013).

AI has the potential to reshape education by automating certain non-teaching tasks, improving data analysis, and optimizing online teaching (Ng et al., 2023). Therefore, teachers benefit significantly from digital platforms that allow them to share plans and content with colleagues and students, simplifying administrative tasks and fostering collaboration (Palm et al., 2024). Additionally, digital communication tools facilitate interactions with parents and students,

reducing time spent on repetitive communication tasks and allowing teachers to focus on core responsibilities (Selwyn, 2013). These systems not only save time but also provide flexibility, enabling teachers to work from home and manage their workload more effectively (Palm et al., 2024). Studies highlight that teachers with access to well-integrated digital systems experience greater autonomy and flexibility, which buffer the negative effects of high job demands (Palm et al., 2024). However, the implementation of digital tools must be balanced, while they reduce certain stressors, they can also create challenges, such as blurred boundaries between work and personal life, which require careful management (Palm et al., 2024).

Overall, digitalization emerges as a vital resource in mitigating burnout and promoting teacher well-being, particularly when combined with collegial support and effective organizational strategies (Demerouti, 2022). To sum up, by reducing job demands, digitalization as a resource helps create a more sustainable working environment for teachers, thus mitigating a major contributor to burnout. Therefore, based on the analysis of scientific literature, the following hypothesis is proposed:

H1: Work pressure (H1a), cognitive demands (H1b), and emotional demands (H1c) will increase burnout, and digital job resources (H1d) will decrease burnout.

1.6 Impact of JD-R and digitalization on well-being

According to the Job Demands-Resources (JD-R) theory, job resources play a vital role not only in mitigating burnout but also in enhancing well-being by fostering engagement, motivation and a sense of accomplishment (Bakker & Demerouti, 2017). The decline in teacher mental health is best explained by increased sensitivity to high job demands (Morris et al., 2025). Pressure of research work is one of the main negative impacting factors of teacher overall well-being (J. Chen et al., 2022). Teachers today experience stress, pressure, and feelings of inadequacy related to the multiple roles they need to assume (Lutovac et al., 2024). The demand to achieve high results, combined with the responsibility of controlling classroom behavior and maintaining student engagement, fosters a demanding setting that can negatively impact teachers' mental well-being (Fang et al., 2023; L. Zhang et al., 2023). There is also tension between cognitive demands and the physical and mental aspects of well-being (Nwoko et al., 2025). The deterioration of teachers' mental well-being extends its impact beyond the educators themselves, influencing students and the broader educational environment (Morris et al., 2025). Furthermore, emotional demands positively predict emotional exhaustion, and negatively predict personal accomplishment (Clarà et al., 2022). Likewise, emotional demands directly affect teachers' psychological well-

being and their long-term decisions to remain in the profession (Hasism & Shokory, 2025). In response to these emotional pressures, teachers frequently rely on emotional regulation techniques to handle the emotional pressures they face in school settings (Chandler & Backhouse, 2023; Hasism & Shokory, 2025; Wu et al., 2020).

On the other hand, since Demerouti (2022) presents technology as a job resource that can help cope with large amounts of information at work and summarize it, allowing the operator to make complex decisions (which is a major job requirement), digitization has a potential to act as a supportive resource that facilitates teachers' daily tasks. Workplace digitization enhances employees' workplace well-being (Z. Han et al., 2025), and digital communication (DC) can be a strong, positive factor of promoting and supporting not only the parent–teacher partnership but also teachers' well-being (Benevene et al., 2020). In addition, the adoption of digital technologies has a positive impact on employee well-being (Sansovini & Magida, 2025). This is consistent with results indicating the importance of digital technologies in improving well-being in the workplace (Day et al., 2010; Hoeven et al., 2016; Khoza, 2022; Molino et al., 2020; Ragsdale & Hoover, 2016; Sardeshmukh et al., 2012; Shamsi et al., 2021). When a workplace uses digital technologies, they help reduce workload by simplifying work processes and at the same time provide employees with learning and other resource opportunities, thereby improving their well-being at work (Scholze & Hecker, 2024). Digitalization, although not originally part of the JD-R model, can be integrated into it, offering valuable insights into its motivational aspects. Digital resources, such as flexible work designs and digitalized decision-making systems, can enhance employees' control over tasks, promoting well-being and motivation (Scholze & Hecker, 2023). For instance, the ability to make timely and flexible decisions, as enabled by digital systems, aligns with the idea of job resources mitigating job demands and fostering positive outcomes (Scholze & Hecker, 2023).

Educators use technology to optimize their work, professional development, and the creation of new methods, thinking, reflection on practice, and to engage students in various related activities and tasks in order to improve academic achievement (Paudel, 2021), which is linked to teacher well-being. Exploration of the context of distance education during the COVID-19 pandemic revealed that teachers' digital competencies are crucial in determining the impact of digitalization on well-being. Teachers who could effectively manage digital tools experienced positive emotions, a clear indicator of well-being. The success of digitalization in enhancing well-being depends on employees' ability to manage digital tools effectively, as well as the organizational support provided (Holzer & Spiel, 2024).

There are studies which focused on digital era's changes highlighting work efficacy, employee well-being, and how digitalization creates competitiveness (e.g. Z. Han et al. (2025)). As already mentioned in the well-being part, the term of well-being refers to physical, mental and social well-being (WHO, 2021), which aligns with three essential human needs – competence, relatedness and autonomy (Ryan & Deci, 2000). This holistic perception of well-being is significant, especially in digital workplaces, as employees meet a lot of challenges. Taking these well-being components into account, JD-R model relates with them, because job requirements refer to material, psychological, social or organizational requirements in the job setting, including role conflict and workload, while job resources refer to material, psychological, social or organizational resources at work, including job autonomy, support from the organization and leaders, and so on (Yang et al., 2018). Therefore, by removing these job demands and strengthening job resources, job facilitates "optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being" (Ryan & Deci, 2000).

When teachers use digital technologies, digital well-being becomes a more central element within the context of wider teacher well-being (Passey, 2021). Digital well-being is a term used to describe the impact of technologies and digital services on people's mental, physical, social and emotional health (JISC, n.d.). The hallmarks of digital well-being include maximum enjoyment and functional support with little loss of control and functional impairment (Bhattacharya et al., 2023). In this setting, physical, mental and social (WHO, 2021) aspects can influence digital well-being. With regard to digital well-being for educators, the focus is more on ways in which educators can use various digital tools (Passey, 2021). Specifically, seven digital tools are identified: course creation tools/e-learning authoring tools, presentation software/animation tools, webinar/meeting tools, screen casting, audio and capture tools, collaboration and file sharing tools, bookmarking and curation tools, and project management tools (Passey, 2021). These digital tools align with the adopting tools identified by Selwyn (2013), which digitalization involves, for example, learning management systems, online communication platforms and digital content to support teaching and administrative tasks. On the other hand, digital well-being is repositioned as a pedagogical cross-cutting issue that requires coordinated efforts across all levels of the education system, highlighting that equitable digital transformation in schools depends on a critical reflection of power asymmetries within society and educational institutions (Weber et al., 2025).

Within the framework, of DJ-R model, Day et al. (2010) examined ICT as a form of digitalization in the workplace, extending the Job Demands-Resources (JD-R) model by exploring

ICT as both a job demand and a job resource. The study highlights that ICT can enhance employees' sense of control and flexibility in their work, facilitate access to information, and strengthen communication and collaboration among colleagues. Scholze and Hecker (2023) also suggest an extended version of JD-R model for understanding the complex effects of digitization in the workplace. By structuring the contradictory effects of digitization and integrated these aspects as factors in both model constructs, they found that the digitization has created many challenges, as well as excellent opportunities for organizations. Although digitization generates technostress (Mahapatra & Pillai, 2018) and leads to cognitive and affective outcomes, including well-being (Marsh et al., 2022), it can also function as a resource rather than a demand (Marsh et al., 2022; Scholze & Hecker, 2023). Furthermore, Palm, Asp, Håkansta, et al. (2024) observed that while the initial phase of digitalization may intensify existing pressures, for example, making it challenging for teachers to allocate time toward its implementation, the integration of digital technology ultimately led to improvements in the work environment. Once established and actively used, digital tools often enhanced efficiency and streamlined tasks, indicating that digitalization can function as a valuable job resource rather than merely an additional demand. In addition, being prepared to use digital tools and feeling confident using them each had a positive effect on how people feel at work (Stang-Rabrig et al., 2022). Teachers who felt more confident using digital media tended to feel less exhausted (Stang-Rabrig et al., 2022). It means that being prepared to use digital tools and feeling confident using them is related to well-being.

Job demands and resources evolve over time, influencing well-being in complex ways (Scholze & Hecker, 2023). Similarly, the immediate and tangible impact of digital competencies on teachers' daily work experiences is evident, suggesting that addressing these competencies is critical to mitigating strain and enhancing well-being (Holzer & Spiel, 2024). The Cross-Cultural Digital intervention in Norway was designed in alignment with the two processes of the Job Demands-Resources (JD-R) model: the health impairment process and the motivational process. The intervention aimed to enhance teachers' job resources and minimize their job demands, with the goal of increasing job engagement, which is a key dimension of well-being, while simultaneously reducing burnout and negative health outcomes (Martinsone, Rutkienė, et al., 2024). Accordingly, this study posits the following hypothesis:

H2: Work pressure (H2a), cognitive demands (H2b), and emotional demands (H2c) will decrease well-being, and digitalization as a job resource (H2d) will increase well-being.

1.7 Impact of burnout on well-being

The interplay between burnout and well-being can be understood through the lens of the Job Demands-Resources (JD-R) theory, which highlights how chronic exposure to high job demands (such as emotional strain and excessive workload) contributes to burnout and reduces overall well-being (Bakker & Demerouti, 2017). Burnout is a risk indicator for subjective well-being, as, according to the JD-R theory, excessive depletion of resources negatively impacts subjective well-being (Bakker et al., 2003, 2007; Bakker & Demerouti, 2017; Hakanen et al., 2006). Since burnout stems from the depletion of emotional resources, it can lead to physical health issues (Bakker et al., 2007) – one of the dimensions of well-being (WHO, 2021).

Burnout diminishes positive emotions, engagement and resilience, leaving individuals vulnerable to stress-related illnesses and psychological disorders, such as anxiety and depression (Maslach & Leiter, 2016). This deterioration of well-being can lead to absenteeism, reduced work performance and even decisions to leave the profession, further compounding the challenges faced by educational institutions (Skaalvik & Skaalvik, 2017a). Burnout can be described as a syndrome arising from unmet needs and expectations – as growing disappointment manifested by mental and physical symptoms that reduce self-esteem (Abromaitienė & Stanišauskienė, 2015) and, at the same time, well-being. People dealing with burnout often view themselves negatively, feel dissatisfied with both their personal worth and job performance (Maslach & Jackson, 1981) and may encounter a range of health and social difficulties (Koeske & Koeske, 1991; Koutsimani et al., 2019). Given that burnout negatively affects an individual's emotions, health, and social life (Renshaw et al., 2015), employees experiencing burnout lose the capacity to provide the intense contributions that make an impact (Schaufeli et al., 2009).

A person's well-being is shaped by many different individual, social and environmental factors throughout life (WHO, 2021), therefore, since burnout is perceived as a multidimensional syndrome that arises when an employee's values or goals are no longer fulfilled, it leads to a drain on their overall well-being (Prentice et al., 2023). TEACHERS BURN: Regarding teachers, a variety of factors contribute to academic burnout, with stress playing a central and influential role (Renshaw et al., 2015; Sokal et al., 2020). Factors contributing to teacher burnout and dissatisfaction with the profession include discipline problems or student behavior disorders, teacher warmth or sensitivity (Bottiani et al., 2019), work-related stress (R. M. Klassen & Chiu, 2010), and low emotional stability (Kim et al., 2019).

Teacher well-being (TWB) is under threat (e.g., Acton & Glasgow (2015); Education Support (2019); Tan & Urdan (2025)). Statistically, 55% of teachers said they are considering

leaving the profession earlier than they had planned (Walker, 2022), and about 44% said they regularly experienced feelings of burnout (Marken & Agrawal, 2022). Exhausted teachers often experience a decline in psychological well-being, and these effects can be particularly pronounced in the case of prolonged stress (Bishop & High, 2023). Furthermore, teacher well-being is linked to important outcomes, including how long teachers remain in the profession, how effective they are, how often they are absent from work, and whether they are willing to support school reforms (Duckworth et al., 2009; UNESCO, 2023).

In education policy and everyday practice, it is very important to take care of teachers' professional well-being in order to encourage teachers to engage in their work, create a positive school atmosphere, and implement sustainable education, because teachers who experience burnout are more likely to leave their profession (Martinsone, Rutkienė, et al., 2024). Educators who maintain supportive relationships with other members of the academic community, share resources, give and receive support, show empathy, and rely on resilience (Kim & Asbury, 2020; Matiz et al., 2020), often cope most effectively with long-term stress. Well-being is the result of several factors, including stress and burnout, which negatively affect well-being, and positive emotions and job satisfaction, which contribute to teachers' well-being (Hascher & Waber, 2021). Therefore, a deeper understanding of the factors that contribute to burnout provides greater insight into the complex demands faced by educators and any mitigating strategies that promote well-being (Bishop & High, 2023).

Lithuanian teachers often complain about heavy workloads, poor professional relationships, large class sizes (Abromaitienė & Stanišauskienė, 2015; Tandzegolskiene - Bielaglove et al., 2024), constant reforms and changes, the growing need to work with students from socially disadvantaged families and children from economically disadvantaged families, long working hours, low salaries, emotional difficulties, lack of autonomy at work, difficult relationships with colleagues, problems with student behavior and increasing student violence, including bullying in schools (Žydžiūnaitė & Rutkienė, 2024).

In Norway, time pressure and discipline problems are predictors of emotional exhaustion (Skaalvik & Skaalvik, 2011), which is the core element of burnout (Maslach et al., 1997). Most studies have shown that the main factors contributing to teacher burnout are: lack of time due to increased paperwork, regular meetings and contacts with the administration and stakeholders, frequent changes to the curriculum, and participation in school-related projects (Skaalvik & Skaalvik, 2010, 2011). Additional factors contributing to burnout may include teachers'

disappointment with their work due to absenteeism and resignations, as well as conceptual dissonance (R. M. Klassen & Chiu, 2010; Skaalvik & Skaalvik, 2010, 2011).

Collectively, employees, including educators, who experience burnout often face decreased psychological well-being (Koeske & Koeske, 1991; Koutsimani et al., 2019) and lose the capacity to provide the meaningful contributions that create an impact (Schaufeli et al., 2009). Supporting this, well-being declines among teachers who feel exhausted (Skaalvik & Skaalvik, 2009b). Furthermore, exhaustion increases when time pressure increases, when autonomy and independence (one of the components of well-being identified by teachers (Collie & Martin, 2017; Fernet et al., 2013; Hakanen et al., 2006; Simbula et al., 2011)) are weakened, and when problems arise in cooperation with parents or guardians (Skaalvik & Skaalvik, 2009b). Focusing on well-being supports the tracking of the equitable distribution of resources, overall thriving, and sustainability (WHO, 2021). These insights provide the basis for proposing the following hypothesis:

H3: Burnout will negatively influence well-being.

Associations between (a) job demands and job resources and (b) teacher motivation and well-being primarily are indirect, mediated through teacher burnout (Skaalvik & Skaalvik, 2021a). Similarly, highly demanding jobs contribute to employee burnout, which consequently negatively affects their psychological well-being (Hu et al., 2017). Additionally, empirical evidence has demonstrated correlations among job demands, burnout, and psychological well-being (Adil & Baig, 2018). Furthermore, it is pointed out that burnout mediates the relationship between job demands and teachers' perceived work ability (PTWA) (Hlado et al., 2025). Supporting these findings, burnout mediates the relationship between job demands and psychological well-being (Siddiqui et al., 2021).

In terms of digital job resources, four of the six studies reported decreased emotional exhaustion, these were all digitized interventions with support systems (Lillelien & Jensen, 2025; Matiz et al., 2020; Oliveira et al., 2022; Pozo-Rico et al., 2020; Zadok-gurman et al., 2021). Likewise, an adequate support system should be provided by offering discussion groups, training scheduling, explanation of content, practicing new stress-reduction techniques, technical support, adapted to different levels of needs among the participants (Lillelien & Jensen, 2025). Consistently with this, digital training programs strengthened teachers' ability to deal with stress (Pozo-Rico et al., 2020). After participating in the training, teachers reported less anxiety, fatigue, skepticism,

and inefficacy related to using ICT in their work. Hence, the study puts forth the following hypothesis:

H4: Burnout will mediate the relationship between work pressure (H4a), cognitive demands (H4b), emotional demands (H4c), digital job resources (H4d) and well-being.

2. METHODOLOGY OF THE IMPACT OF JOB DEMANDS AND DIGITAL JOB RESOURCES ON TEACHER BURNOUT AND WELL-BEING

2.1 Research aim, conceptual model and hypotheses

Aim of empirical research

To empirically assess the relationship between job demands (X1), digital job resources (X2) and teacher well-being (Y), as well as the mediating effect of burnout (M) on this relationship.

Objectives of empirical research

1. To empirically determine what portion of teachers' overall work time is spent on job demands and digital job resources, as well as how they evaluate their burnout and well-being.

2. To empirically identify differences in the assessments of job demands, digital job resources, burnout, and well-being between teachers in Lithuania and Norway based on respondents' demographic characteristics using parametric tests.

3. To determine the effects of job demands and digital job resources on burnout and well-being, and to compare these effects between the two countries.

4. To determine the effect of burnout on well-being and compare it between the two countries.

5. To determine whether burnout mediates the relationship between job demands, digital job resources, and well-being.

Research hypotheses

Based on the information analyzed in the literature review, the hypotheses presented in Table 1 are proposed.

Table 1 *Overview of research hypotheses*

Hypothesis	Statement
H1	Work pressure (H1a), cognitive demands (H1b), and emotional demands (H1c) will increase burnout, and digital job resources (H1d) will decrease burnout.
H2	Work pressure (H2a), cognitive demands (H2b), and emotional demands (H2c) will decrease well-being, and digitalization as a job resource (H2d) will increase well-being.
H3	Burnout will negatively influence well-being.
H4	Burnout will mediate the relationship between work pressure (H4a), cognitive demands (H4b), emotional demands (H4c), digital job resources (H4d) and well-being.

Conceptual model of the study

Based on the proposed research hypotheses, a conceptual model was developed and is presented in Figure 1.

Figure 1 *Conceptual research model*
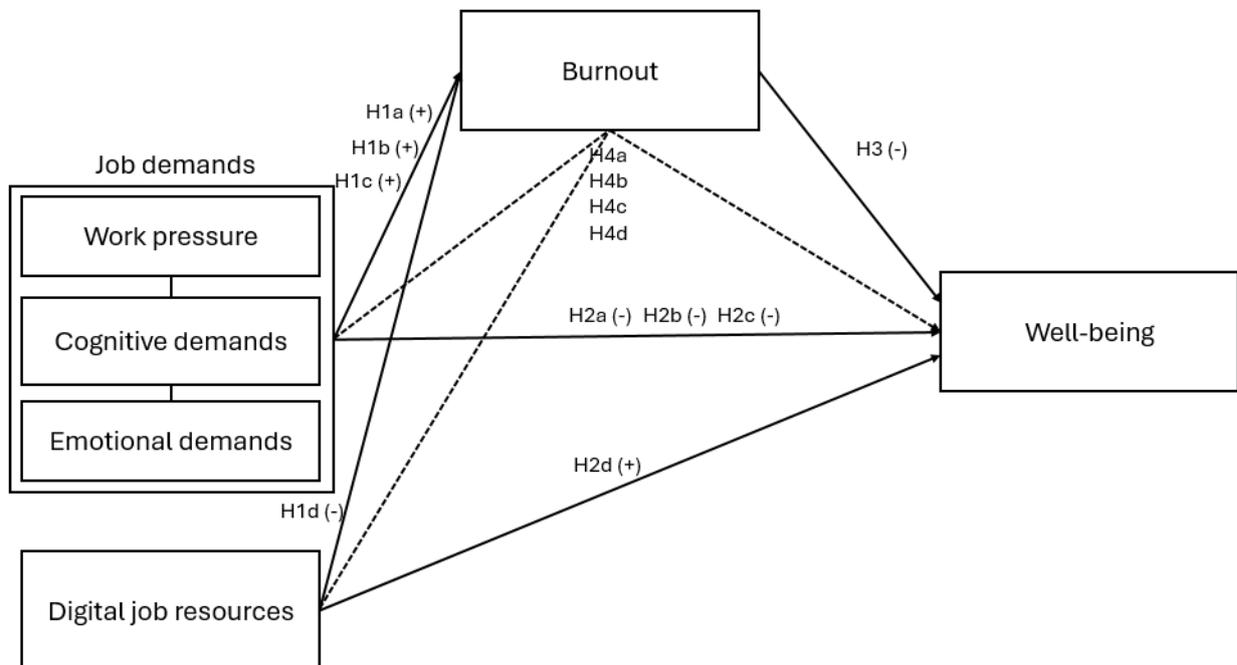
Source: created by the author.

Note: Solid arrows mark direct effects, and dashed arrows represent indirect effects through the mediator.

Job demands (work pressure, cognitive and emotional demands) are expected to increase burnout and reduce well-being, whereas digital job resources are anticipated to have the opposite effect – reducing burnout and enhancing well-being. Burnout, in turn, has a direct negative relationship with well-being. Moreover, burnout serves as a mediator in two relationships: between each of the job demands and well-being, and between digital job resources and well-being.

2.2 Research instrumentation and implementation

Research instrument

For the empirical study, a quantitative research method was chosen, and the data for the study are collected using a semi-structured questionnaire survey. Quantitative analysis was used to test the research hypotheses (H1a, H1b, H1d, H1c, H2a, H2b, H2c, H2d, H3, H4a, H4a, H4b, H4c, H4d). The independent variables are job demands (work pressure, cognitive demands, emotional demands) and digital job resources (X1; X2), while well-being (Y) serves as the dependent variable and burnout (M) as the mediator.

In order to determine the impact of job demands and digital job resources (independent variables) on burnout (dependent variable) as well as the impact of burnout on teachers' well-being, a questionnaire survey was developed based on scientific literature and constructs used in previous research studies. At the beginning of the questionnaire, general information is provided – including the title and aim of the study, the intended use of the collected data and an emphasis on the anonymity of the respondents. The questionnaire consists of five sections: the first section was designed to measure teachers' job demands (14 items); the second section includes statements aimed at assessing the use of digital job resources by teachers (5 items); the third section presents statements intended to evaluate teacher burnout (12 items); the fourth section includes statements to assess teacher well-being (5 items); and the fifth section contains demographic questions (7 questions for teachers in Lithuania and 6 for those in Norway). The majority of the questions in the research instrument are closed-ended. However, the demographic questions related to respondents' age and work experience (in years) are open-ended. The quantitative research questionnaire in Lithuanian and Norwegian is presented in Annexes 1 and 2, respectively.

Measured factors and constructs used for their measurement

Three stressors representing the job demands of teachers were selected a questionnaire which was developed by Bakker (2014). Bakker's (2014) questionnaire identifies five elements: work

pressure, cognitive demands, emotional demands, role conflict, and hassles. However, only three sub-constructs – work pressure, cognitive demands, and emotional demands – are utilized. This decision aligns with the study's focus on the primary drivers of burnout that are most consistently linked to the teaching profession. These three elements capture the essential mental and emotional strains teachers face, making them particularly relevant for investigating burnout in educational contexts.

Respondents rate their job demands on a 5-point Likert scale ranging from 1 ("never") to 5 ("very often"). Each sub-construct comprises multiple items that capture specific aspects of job demands, such as time pressure, cognitive demands, and emotional challenges (see Tables 2–4).

Table 2 *Construct – Work pressure (Bakker, 2014)*

1.	Do you have to work at speed?
2.	Do you have too much work to do?
3.	How often do you have to work extra hard in order to reach a deadline?
4.	Do you work under time pressure?

Table 3 *Construct – Cognitive demands (Bakker, 2014)*

1.	Does your work require a lot of concentration?
2.	Does your work demand enhanced care or precision?
3.	Do you regard your work as mentally very straining?
4.	Does your work require your constant attention?

Table 4 *Construct – Emotional demands (Bakker, 2014)*

1.	Is your work emotionally demanding?
2.	In your work, are you confronted with things that personally touch you?
3.	Do you face emotionally charged situations in your work?
4.	In your work, do you deal with clients who incessantly complain?
5.	In your work, do you have to deal with demanding clients?
6.	Do you have to deal with clients who do not treat you with the appropriate respect and politeness?

Source: compiled by the author based on Bakker (2014).

In this study, the digitalization of schools is measured as a job resource using the questionnaire developed by Siljebo (2020). This instrument is grounded in Engeström's (2015) expansive learning theory and focuses on three levels of learning related to the use of digital technologies in schools. However, only the first level of the questionnaire will be utilized, as it specifically measures teachers' operational use of digital technologies in their daily tasks, such as planning and performing work activities. This choice is justified because the research aims to evaluate the basic application of digital tools as a job resource, which aligns with the study's focus on the foundational impact of digitalization on teacher well-being. The first level includes five items assessed on a 5-point Likert scale, ranging from 1 ("completely disagree") to 5 ("completely agree") (see Table 5).

Table 5 *Construct – Digital Resources for Work (Siljebo, 2020)*

1.	I use digital technologies to plan my daily work tasks.
2.	I use digital technologies to do my daily work tasks.
3.	I use digital technologies for documentation.
4.	I use digital technologies for communication.
5.	I use digital technologies to search for information

Source: compiled by the author based on Siljebo (2020).

In this study, teacher burnout is measured using the Lithuanian version of the Burnout Assessment Tool (BAT-LT) developed by Lazauskaitė-Zabielskė et al. (2023). The BAT-LT evaluates core symptoms of burnout across four dimensions: exhaustion, mental distance, cognitive impairment, and emotional impairment. This instrument has been selected for its comprehensive approach to capturing the multidimensional nature of burnout, making it particularly suitable for analysing the challenges faced by teachers in their work environment.

For the purposes of this research, the short version of the BAT-LT was utilized, which includes key items from each dimension. The statements are assessed using a Likert scale, ranging from 1 ("completely disagree") to 5 ("completely agree"). This choice ensures the tool remains efficient while maintaining its psychometric robustness, facilitating a focused evaluation of burnout as a critical outcome in the context of job demands and resources (see Table 6).

Table 6 *Constructs – Exhaustion, Mental distance, Cognitive impairment and Emotional impairment (Lazauskaitė-Zabielskė et al., 2023)*

Exhaustion
1.   At work, I feel mentally exhausted*
2.   After a day at work, I find it hard to recover my energy*
3.   At work, I feel physically exhausted*
4.   I struggle to find any enthusiasm for my work*

Mental distance
5.   I feel a strong aversion towards my job*
6.   I'm cynical about what my work means to others*
7.   At work, I have trouble staying focused*

Cognitive impairment
8.   At work I struggle to think clearly*
9.   When I'm working, I have trouble concentrating*
10.   At work, I feel unable to control my emotions*

Emotional impairment
11.   I do not recognize myself in the way I react emotionally at work*
12.   At work I may overreact unintentionally*

Source: compiled by the author based on Lazauskaitė-Zabielskė et al. (2023).

Note: * = Short version

Teacher well-being is measured using *The World Health Organization-Five Well-Being Index* (WHO-5) which was developed by the World Health Organization (1998) as a tool to assess subjective psychological well-being.. The WHO-5 is a widely used and validated tool for assessing subjective psychological well-being. It consists of five positively phrased items that reflect key aspects of well-being, such as mood, vitality, and general life satisfaction (see Table 7). Respondents rate their experiences over the last two weeks using a 6-point Likert scale, ranging from 0 ("at no time") to 5 ("all of the time").

The WHO-5 was chosen for its brevity, ease of administration and robust psychometric properties, making it suitable for evaluating well-being in the context of teaching professionals. Its focus on positive aspects of mental health aligns with the study's aim to explore the outcomes of job demands and resources in the educational environment.

Table 7 *Construct – Well-being (WHO, 2024)*

1.	I have felt cheerful and in good spirits
2.	I have felt calm and relaxed
3.	I have felt active and vigorous
4.	I woke up feeling fresh and rested
5.	My daily life has been filled with things that interest me

Source: compiled by the author based on WHO (2024).

The demographic variables presented at the end of the questionnaire are intended to gather information on the distribution of respondents by gender, age, education level, teacher qualification category, type of school in which they work, educational attainment, and years of professional experience. The following demographic items were included in the questionnaire administered to teachers from both countries, based on the Han et al. (2020) and Li et al. (2025) frameworks:

- Gender (*male, female*);
- Age (*number of years*);
- Teacher qualification category (*teacher, senior teacher, methodologist teacher, expert teacher*) (this question was asked only of Lithuanian teachers);
- Educational level of students taught (*primary education students (grades 1–4); lower and/or upper secondary education students (grades 5–12)*);
- Type of school in which the teacher works (*primary school, lower secondary school, upper secondary school*);
- Educational attainment (*secondary education, higher education – bachelor's degree, higher education – master's degree, doctoral degree*);
- Length of professional experience (*in years*).

2.3 Sampling and characteristics of the research sample

Target population

The target population of this study consists of teachers working in primary, lower secondary, and/or upper secondary schools in Lithuania and Norway. A non-probability sampling method was used, as comprehensive data and contact information for all working teachers in

Lithuania and Norway were not available. Consequently, it was not possible to ensure that all individuals working in these countries had an equal opportunity to participate in the survey.

The sample size complies with the requirements of statistical research methods to ensure the reliability of statistical calculations. In most quantitative research studies, a minimum sample size of 50 observations, preferably 100, is required to maintain a statistical power of 0.80 in multiple regression analysis (Hair et al., 2014). However, Hair et al. (2014) emphasizes that the minimum ratio should never be lower than 5 observations per independent variable in the model, while the recommended ratio ranges from 15 to 20 observations per independent variable. In the current study, the independent variables are the constructs of job demands and digital job resources, which together consist of 19 items. Based on this guideline, a minimum of 285 respondents should be surveyed ($19 \times 15 = 285$).

In summary, the guidelines provided by the authors serve as recommendations for determining an appropriate sample size to ensure the reliability of statistical calculations. In this study, the minimum required sample size is 285 respondents in each of the two countries under investigation, following the stricter criterion of 15 observations per item ($19 \times 15 = 285$).

Data collection

While the target population was teachers in Lithuania and Norway working in primary, lower secondary, and/or upper secondary schools where communication takes place entirely in Lithuanian and Norwegian, respectively, the respondents nevertheless preferred to complete the questionnaires in their native languages. Teachers in these countries also use Lithuanian or Norwegian in the course of their daily professional duties. For these reasons, it was decided to distribute separate questionnaires in each country: a Lithuanian-language questionnaire in Lithuania and a Norwegian-language questionnaire in Norway. Data were collected using the platforms *Apklausa.lt* (https://apklausa.lt/f/zwxfmd9.f; for Lithuania's teachers, in Lithuanian language) and *PollMill.com* (https://pollmill.com/f/y4ad9x1.f; for Norway's teachers, in Norwegian language), and the survey links were shared on social media – primarily in Facebook groups for teachers such as *Mokytojai lituanistai*, *Mokytojai ir pedagogai*, *Norsk fysikklærerforening* and *Andreklasselærer*. Survey links were also sent to school administrations via email, meaning that only individuals who received the link had access to the questionnaire. Additionally, QR codes linking to the survey were distributed to some schools in Lithuania and posted in teachers' lounges, allowing teachers who do not use social media to participate.

Given that the survey was conducted in different countries, the questionnaire was first distributed to teachers working in Lithuania. Later, with the assistance of school administrations and leadership teams, the Norwegian version of the survey was disseminated in Norway. The quantitative study was carried out between February and March 2025. It is important to note that a minimum data collection period of two months was planned to ensure that sufficient responses would be gathered before the summer break. This timing was chosen because teachers in both Lithuania and Norway are typically on holiday during the summer. The average time required to complete the survey in both countries was approximately 7 minutes.

For the processing and analysis of quantitative research data, the statistical software package *IBM SPSS Statistics 29.0* was used. The following research and data analysis methods are employed in this study:

- Descriptive statistics
- *Cronbach's alpha* analysis
- Normality distribution analysis (Kolmogorov-Smirnov and Shapiro-Wilk tests)
- Significance tests (Student's t-test and one-way analysis of variance (ANOVA))
- Regression and mediation effect analysis

3. THE ANALYSIS OF EMPIRICAL RESULTS

3.1 Data cleaning for the research database

The platforms *Apklausa.lt* and *Pollmill.com* do not allow for direct import of the collected data into SPSS software. Therefore, before transferring the data into SPSS, it was first imported to Microsoft Excel. The collected data was reviewed and organized by converting construct statements into numerical format, based on the scale for each construct. Additionally, responses to demographic questions were processed (e.g., respondents could enter their age as free text, so such responses were converted into numerical values). Responses in the "other" free-text fields were also reviewed and grouped. Finally, the data was imported into SPSS, where data preparation and processing were performed. Variables, their types, scales, names, etc., were properly organized. During the data verification process, it was also noted that not all statements and demographic questions were answered.

A total of 652 teachers responded to the request to participate in surveys (301 from Lithuania and 351 from Norway). Upon reviewing the dataset, 16 responses from Norwegian teachers were excluded. These data were removed because the respondents did not belong to the target group for the Norwegian teacher survey. While the surveys were intended for teachers working in primary, lower secondary, and/or upper secondary schools, responses were received from teachers currently working in these levels. Responses from teachers working in *Voksenopplæring* (adult education), special education teachers (*Spesialpedagog*), preschool teachers (*Barnehagelærer*), team leaders (*Teamleder*), and special education coordinators (*Spes.ped-koordinator*) were excluded. After data cleaning, 636 valid responses remained (301 from Lithuania and 335 from Norway).

3.2 Demographic profile of the respondents

Respondents were asked questions regarding their gender, age, the type of teacher they are, the type of school they work in, their level of education and their years of teaching experience (see Table 8).

Table 8 *Respondents' profile for both samples (Lithuania and Norway)*

Variables	Total (n = 636)		Lithuania (n = 301)		Norway (n = 335)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender						
Male	54	8.49%	19	6.31%	35	10.45%
Female	576	90.57%	282	93.69%	294	87.76%
Other	6	0.94%	0	0%	6	1.79%
Teaching role						
Primary school teacher	264	41.51%	82	27.24%	182	54.33%
Secondary school teacher	356	55.97%	219	72.76%	137	40.90%
Both primary and secondary school teacher	11	1.73%	0	0%	11	3.28%
Other	5	0.79%	0	0%	5	1.49%
Type of school						
Primary school	220	34.59%	42	13.95%	178	53.13%
Lower secondary school	173	27.20%	92	30.56%	81	24.18%
Upper secondary school	186	29.25%	138	45.85%	48	14.33%
Both primary and secondary school	27	4.25%	2	0.66%	25	7.46%
Both lower and upper secondary school	23	3.62%	21	6.98%	2	0.60%
Other	7	1.10%	6	1.99%	1	0.30%
Education						
Secondary school	3	0.47%	1	0.33%	2	0.60%
Bachelor's degree	279	43.87%	154	51.16%	125	37.31%
Master's degree	296	46.54%	138	45.85%	158	47.16%
PhD	5	0.79%	3	1.00%	2	0.60%
Adjunct	33	5.19%	5	1.66%	28	8.36%
General teacher education	8	1.26%	0	0%	8	2.39%
Other	12	1.89%	0	0%	12	3.58%
Average age (in years)	45.02		49.50		40.99	
Average work experience (in years)	18.78		24.43		13.71	

Source: Author's own creation work.

Analysis of the collected data revealed that out of 576 respondents were women. Regarding the respondents' age, the average age of Lithuanian teachers was 49.5 years, while the average age of Norwegian teachers is 40.99 years. This indicates that the teachers in the Lithuanian sample were, on average, older, suggesting that this particular group may include a higher proportion of more experienced teachers. In contrast, the younger average age in Norway may reflect a larger part of early-career teachers or higher turnover within the education system. Additionally, it was observed that a large proportion of respondents in both Lithuania (98.01%) and Norway (85.07%) hold higher education degrees.

In terms of professional experience, the average work experience in years among Lithuanian teachers (24.43 years) is higher than that of Norwegian teachers (13.71 years), suggesting that the Lithuanian sample consisted of more experienced educators, which may reflect the higher teacher retention and longer career stability in Lithuania. Overall, the sample consisted of experienced and well-educated teachers. The majority of them were female.

3.3 Descriptive statistics and normality testing of the data

The descriptive statistics of the empirical data were used in this study. Table 9 and Table 10 below display the descriptive statistics for each item within the constructs, as well as the overall mean and standard deviation for each construct. The constructs analyzed in the study include work pressure, cognitive demands, emotional demands, digital job resources, burnout and well-being.

In this study, the construct of job demands was divided into three dimensions – work pressure, cognitive demands, and emotional demands – based on Bakker's questionnaire used in the research (Table 9). This division allows for a more detailed understanding of different types of demands teachers experience in their work.

Table 9 *Descriptive statistics of job demands variables (work pressure, cognitive demands and emotional demands)*

Construct	Statement	M	SD
Work pressure (4 questions) α=0,871	Do you have to work at speed?	4,257	0,830
	Do you have too much work to do?	4,211	0,973
	How often do you have to work extra hard in order to reach a deadline?	3,940	0,953
	Do you work under time pressure?	3,991	0,982
Cognitive demands (4 questions) α=0,809	Does your work require a lot of concentration?	4,472	0,728
	Does your work demand enhanced care or precision?	4,405	0,752
	Do you regard your work as mentally very straining?	4,562	0,735
	Does your work require your constant attention?	4,603	0,683
	Is your work emotionally demanding?	4,488	0,801
	In your work, are you confronted with things that personally touch you?	3,956	1,039
Emotional demands (6 statements) α=0,845	Do you face emotionally charged situations in your work?	4,276	0,889
	In your work, do you deal with students or their parents who incessantly complain?	3,542	1,179
	In your work, do you have to deal with demanding students or parents?	3,872	1,104
	Do you have to deal with clients who do not treat you with the appropriate respect and politeness?	3,321	1,323

Source: compiled by the author.

Note: N = 635 (number of respondents); M = mean; SD = standard deviation; α = Cronbach's alpha (internal consistency reliability).

Table 10 *Descriptive statistics for digital job resources, burnout, and well-being*

Construct	Statement	M	SD
Digital job resources (5 statements) α=0,804	I use digital technologies to plan my daily work tasks.	4,346	0,853
	I use digital technologies to do my daily work tasks.	4,354	0,874
	I use digital technologies for documentation.	4,583	0,706
	I use digital technologies for communication.	4,632	0,640
	I use digital technologies to search for information.	4,736	0,569
Burnout (12 statements) α=0,924	At work, I feel mentally exhausted*	3,681	1,001
	After a day at work, I find it hard to recover my energy*	3,881	1,026
	At work, I feel physically exhausted*	3,442	1,092
	I struggle to find any enthusiasm for my work*	2,989	1,156
	I feel a strong aversion towards my job*	2,204	1,170
	I'm cynical about what my work means to others*	2,291	1,178
	At work, I have trouble staying focused*	2,511	1,066
	At work I struggle to think clearly*	2,428	1,109
	When I'm working, I have trouble concentrating*	2,516	1,124
	At work, I feel unable to control my emotions*	2,072	0,964
	I do not recognize myself in the way I react emotionally at work*	2,017	1,070
	At work I may overreact unintentionally*	2,299	1,078
Well-being (5 statements) α=0,859	I have felt cheerful and in good spirits.	2,851	1,240
	I have felt calm and relaxed.	2,597	1,187
	I have felt active and vigorous.	2,660	1,222
	I woke up feeling fresh and rested.	2,329	1,407
	My daily life has been filled with things that interest me.	2,665	1,362

Source: compiled by the author.

Note: N = 635 (number of respondents); M = mean; SD = standard deviation; α = Cronbach's alpha (internal consistency reliability); * – short version

The respondents evaluated job demands in the range between 3 and 5, indicating a moderately high level of perceived work pressure, cognitive demands and emotional demands. The use of digital tools was rated above 4, suggesting that teachers frequently utilize digital resources in their work. Burnout was assessed between 2 and 4, showing a moderate level of exhaustion, mental distance, cognitive impairment and emotional impairment among participants. Meanwhile, well-being received ratings above 2, reflecting a generally positive perception of overall well-being.

Descriptive latent variables statistics and latent variable normality indicators are presented in Table 11.

Table 11 *Descriptive statistics (Mean, SD, Skewness, Kurtosis) of the study constructs*

	M	SD	Skewness	Kurtosis
Work pressure (Likert scale 1-5)	4,100	0,796	-1,019	0,631
Cognitive demands (Likert scale 1-5)	4,511	0,578	-1,482	**2,264**
Emotional demands (Likert scale 1-5)	3,909	0,804	-0,626	-0,243
Digital job resources (Likert scale 1-5)	4,530	0,553	0,411	**2,270**
Burnout (Likert scale 1-5)	2,694	0,803	-1,413	-0,068
Well-being (Likert scale 0-5)	2,620	1,028	-0,137	-0,348

Source: compiled by the author

Note: M = mean, SD = standard deviation, Skewness = coefficient of asymmetry, Kurtosis = coefficient of kurtosis

The asymmetry coefficient – the shift of data to the left and right of the normal distribution (skewness) and the excess coefficient (kurtosis) are also analyzed. According to George, Mallery (2018), asymmetry and excess coefficients between –2 and +2 are considered acceptable. In this case, the values of asymmetry and excess coefficients range between –1.482 and 2.270, most of them are close to the normal distribution, as they fall within the range between –2 and +2, except for cognitive demands and digital job resources, whose values are 2.264 and 2.270, respectively, and do not fall within the aforementioned range. As two values exceed the –2 and +2 limits (Table 13), more relaxed criteria for skewness and kurtosis will be applied in this analysis. According to Curran et al. (1996), values of univariate skewness up to ±2 and kurtosis up to ±7 are considered to represent moderate non-normality and are acceptable for structural equation modeling. Therefore, it can be concluded that the data in this study is not perfectly normally distributed, but it is close to a normal distribution.

The results of the descriptive analysis showed that teachers reported relatively high levels of digital job resources (M = 4,530, SD = 0,553) and cognitive demands (M = 4,511, SD = 0,578). The average level of work pressure (M = 4,100, SD = 0,796) and emotional demands (M = 3,909, SD = 0,804) was moderate, while burnout (M = 2.694, SD = 0.803) was rated comparatively lower. Well-being had the lowest mean value (M = 2,620, SD = 1,028), nevertheless, it also showed the highest standard deviation, suggesting a wide variation in respondents' perceptions of their well-being, with both higher and lower evaluations being reported.

3.4 Hypothesis testing: Norwegian and Lithuanian samples

In order to examine the relationships between the study variables, a regression analysis was conducted using the Hayes PROCESS macro for SPSS (Version 4.2). Four models were tested

separately to assess the proposed relationships within the conceptual framework. The analysis included both direct and mediating effects: the direct effects between job demands (work pressure, cognitive demands and emotional demands), digital job resources, burnout, and well-being were examined, as well as the mediating effect of burnout on the relationship between job demands (work pressure, cognitive demands and emotional demands) and well-being, and digital job resources and well-being.

3.4.1 Effects of work pressure

The analyses were conducted in two stages. First, direct effects among work pressure, burnout, and well-being were tested using regression analysis. Second, a mediation analysis was performed to examine whether burnout mediates the relationship between work pressure and well-being. The results for both the Lithuanian and Norwegian samples are presented below. Figure 2 illustrates both the direct and indirect effects, while the detailed results for the Lithuanian and Norwegian samples are presented in Table 12 (direct effects) and Table 13 (mediation analysis).

Figure 2 *Conceptual model of direct and mediated relationships among work pressure, burnout, and well-being*
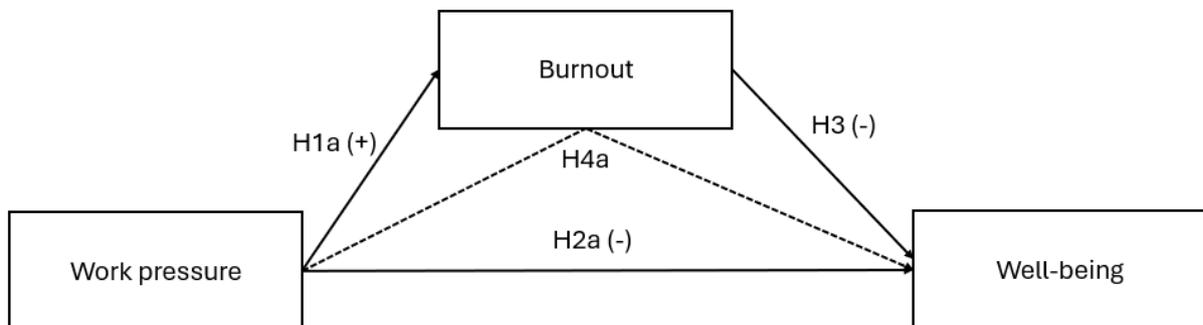
Note: The dashed line represents the mediated relationship, while the solid lines indicate direct relationships.

Table 12 *Regression results for direct effects of work pressure, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Relationship	*R-sq*	Standardized *β*	*t*	*p*	95% Confidence Interval	
						LLCI	ULCI
LT: H1a	WP→BURN	0,177	0,420	8,519	<0,001	0,298	0,477
LT: H2a	WP→WB	0,019	-0,089	-1,348	0,095	-0,275	0,051
LT: H3	BURN→WB	0,019	-0,072	-0,844	0,095	-0,325	0,130
NOR: H1a	WP→BURN	0,230	0,479	11,051	<0,001	0,428	0,614
NOR: H2a	WP→WB	0,075	-0,160	-2,627	<0,001	-0,373	-0,054
NOR: H3	BURN→WB	0,075	-0,159	-2,109	<0,001	-0,376	-0,013

Source: Compiled by author.

Note: N = 635, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample; WP = work pressure; BURN = burnout; WB = well-being.

The regression analysis of both samples revealed that work pressure had a significant positive effect on burnout (NOR: $β$ = 0,479, t = 11,051, p < 0,001; LT: $β$ = 0,420, t = 8,519, p < 0,001). The model explained 23% of the variance in burnout (R^2 = 0.230), suggesting a moderate explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 17.7% of the variance (R^2 = 0.177), indicating a slightly weaker but still meaningful ability to explain differences in burnout levels within this sample. These results suggest that higher work pressure substantially increases teacher burnout, and this **supports the Hypothesis 1a** for both the Lithuanian and Norwegian samples.

The regression analysis of Norwegian sample revealed that work pressure had a significant negative effect on well-being ($β$ = -0,160, t = -2,627, p < 0,001), indicating that higher work pressure is associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that work pressure had a non-significant negative effect on well-being ($β$ = -0,089, t = -1,348, p = 0,095), indicating that work pressure does not meaningfully predict well-being among teachers in Lithuania. The model explained 7.5% of the variance in well-being (R^2 = 0.075), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 1.9% of the variance (R^2 = 0.019), indicating a very weak explanatory power and suggesting that the model has limited ability

to explain differences in well-being levels within this sample. Thus, the **Hypothesis 2a was supported for the Norwegian sample**, whereas **it was rejected for the Lithuanian sample**.

The regression analysis of Norwegian sample revealed that burnout had a significant negative effect on well-being (β = -0,195, t = -2,109, $p < 0,001$), indicating that higher burnout is associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that burnout had a non-significant negative effect on well-being (β = -0,072, t = -0,844, p = 0,095). The model explained 7.5% of the variance in well-being (R^2 = 0.075), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 1.9% of the variance (R^2 = 0.019), indicating a very weak explanatory power and suggesting that the model has limited ability to explain differences in well-being levels within this sample. These results suggest that higher burnout decreases Norwegian teacher well-being, and this **supports the Hypothesis 3**, whereas it was **rejected for the Lithuanian** sample.

The next table displays the mediation results, illustrating the role of burnout in the relationship between work pressure and well-being across the Lithuanian and Norwegian samples.

Table 13 *Mediation analysis results (Total, Direct, and Indirect Effects) for work pressure, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Total effect of X on Y					
	Effect	**SE**	*t*	*p*	**LLCI**	**ULCI**
LT: H4a total	-0,150	0,072	-2,068	0,040	-0,292	-0,007
LT: H4a direct	-0,112	0,083	-1,348	0,179	-0,275	0,051
LT: H4a indirect	-0,030	0,036			-0,100	0,039
NOR: H4a total	-0,315	0,072	-4,397	0,000	-0,456	-0,174
NOR: H4a direct	-0,213	0,081	-2,627	0,009	-0,373	-0,054
NOR: H4a indirect	-0,076	0,037			-0,152	-0,007

Source: Compiled by the author.

Note: N = 635, SE – standard error, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample.

In the Norwegian sample, the total effect of work pressure on well-being was -0,315 ($p < 0.05$), indicating a statistically significant negative relationship. The indirect effect (X → M → Y) through burnout was also significant, suggesting that burnout partially mediates this relationship.

In contrast, for the Lithuanian sample, the total effect was -0,150 ($p < 0.05$), with the indirect effect statistically insignificant. However, the strength of the mediation effect (standardized coefficient -0,076 vs. -0,030) differs between the two groups, implying that burnout plays a slightly stronger mediating role in Norway compared to Lithuania. Thus, the **Hypothesis 4a is supported for the Norwegian sample**, while it is **rejected for the Lithuanian sample**.

3.4.2 Effects of cognitive demands

The analyses were conducted in two stages. First, direct effects among cognitive demands, burnout, and well-being were tested using regression analysis. Second, a mediation analysis was performed to examine whether burnout mediates the relationship between cognitive demands and well-being. The results for both the Lithuanian and Norwegian samples are presented below. Figure 3 illustrates both the direct and indirect effects, while the detailed results for the Lithuanian and Norwegian samples are presented in Table 14 (direct effects) and Table 15 (mediation analysis).

Figure 3 *Conceptual model of direct and mediated relationships among cognitive demands, burnout, and well-being*
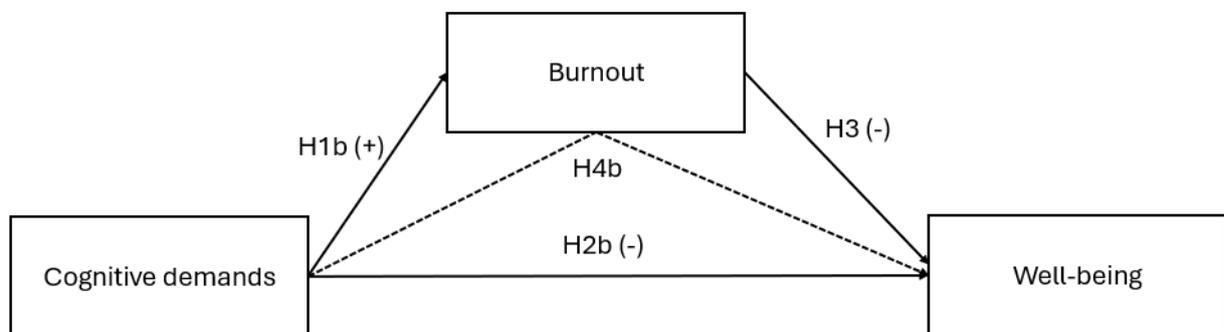
Note: The dashed line represents the mediated relationship, while the solid lines indicate direct relationships.

Table 14 *Regression results for direct effects of cognitive demands, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Relationship	R-sq	Standardized β	t	p	95% Confidence Interval	
						LLCI	ULCI
LT: H1b	CD→BURN	0,070	0,265	4,929	<0,001	0,211	0,492
LT: H2b	CD→WB	0,019	-0,087	-1,382	0,117	-0,378	0,066
LT: H3	BURN→WB	0,019	-0,086	-1,093	0,117	-0,328	0,094
NOR: H1b	CD→BURN	0,162	0,402	8,919	<0,001	0,451	0,707
NOR: H2b	CD→WB	0,060	-0,070	-1,243	<0,001	-0,318	0,072
NOR: H3	BURN→WB	0,060	-0,207	-2,791	<0,001	-0,433	-0,075

Source: Compiled by author

**Note.** N = 635, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample; CD = cognitive demands; BURN = burnout; WB = well-being.

The regression analysis of both samples revealed that cognitive demands had a significant positive effect on burnout (NOR: β = 0,402, t = 8,919, p < 0,001; LT: β = 0,265, t = 4,929, p = <0,001), indicating that higher cognitive demands is associated with higher levels of burnout among Norwegian and Lithuanian teachers. The model explained 16.2% of the variance in burnout (R^2 = 0.162), indicating a moderate explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 7% of the variance (R^2 = 0.070), indicating a very weak explanatory power and suggesting that the model has limited ability to explain differences in burnout levels within this sample. These results suggest that higher cognitive demands decreases both Norwegian and Lithuanian teacher burnout, and this **supports the Hypothesis 1b**.

The regression analysis of Norwegian sample revealed that cognitive demands had a significant negative effect on well-being (β = -0,070, t = -1,243, p < 0,001), indicating that higher cognitive demands are associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that cognitive demands had a non-significant negative effect on well-being (β = -0,087, t = -1,382, p = 0,117), indicating that cognitive demands do not meaningfully predict well-being among teachers in Lithuania. The model explained 6% of the variance in well-being (R^2 = 0.060), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 1.9% of the variance (R^2 = 0.019), indicating a very weak explanatory power and suggesting that the model

has limited ability to explain differences in well-being levels within this sample. Therefore, the **Hypothesis 2b is not supported in either samples.**

The regression analysis of Norwegian sample revealed that burnout had a significant negative effect on well-being ($\beta = -0,207$, $t = -2,791$, $p < 0,001$), indicating that higher burnout is associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that burnout had a non-significant negative effect on well-being ($\beta = -0,086$, $t = -1,093$, $p = 0,117$), indicating that burnout does not meaningfully predict well-being among teachers in Lithuania. The model explained 6% of the variance in well-being ($R^2 = 0.060$), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 1.9% of the variance ($R^2 = 0.019$), indicating a very weak explanatory power and suggesting that the model has limited ability to explain differences in well-being levels within this sample. Therefore, the **Hypothesis 3 was supported** for the **Norwegian sample**, whereas it was **rejected** for **the Lithuanian sample**.

The next table displays the mediation results, illustrating the role of burnout in the relationship between cognitive demands and well-being across the Lithuanian and Norwegian samples.

Table 15 *Mediation analysis results (Total, Direct, and Indirect Effects) for cognitive demands, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Total effect of X on Y					
	Effect	SE	*t*	*p*	LLCI	ULCI
LT: H4b total	-0,197	0,107	-1,838	0,067	-0,409	0,014
LT: H4b direct	-0,156	0,113	-1,382	0,168	-0,378	0,066
LT: H4b indirect	-0,023	0,021			-0,067	0,019
NOR: H4b total	-0,270	0,088	-3,071	0,002	-0,444	-0,097
NOR: H4b direct	-0,123	0,099	-1,243	0,215	-0,318	0,072
NOR: H4b indirect	-0,082	0,031			-0,149	-0,027

Source: Compiled by the author

Note: N = 635, SE – standard error, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample.

In the Norwegian sample, the total effect of cognitive demands on well-being was -0,270 ($p < 0.05$), indicating a statistically significant negative relationship. The indirect effect ($X \rightarrow M \rightarrow Y$) through burnout was also significant, suggesting that burnout mediates this relationship.

In contrast, for the Lithuanian sample, the total effect was -0,197 ($p > 0.05$), with the indirect effect also statistically insignificant. However, the strength of the mediation effect (standardized coefficient -0,082 vs. -0,023) differs between the two groups, implying that burnout plays a slightly stronger mediating role in Norway compared to Lithuania. Thus, the **Hypothesis 4b is supported for the Norwegian sample**, while it is **rejected for the Lithuanian sample**.

3.4.3 Effects of emotional demands

The analyses were conducted in two stages. First, direct effects among emotional demands, burnout, and well-being were tested using regression analysis. Second, a mediation analysis was performed to examine whether burnout mediates the relationship between emotional demands and well-being. The results for both the Lithuanian and Norwegian samples are presented below. Figure 4 illustrates both the direct and indirect effects, while the detailed results for the Lithuanian and Norwegian samples are presented in Table 16 (direct effects) and Table 17 (mediation analysis).

Figure 4 *Conceptual model of direct and mediated relationships among emotional demands, burnout, and well-being*
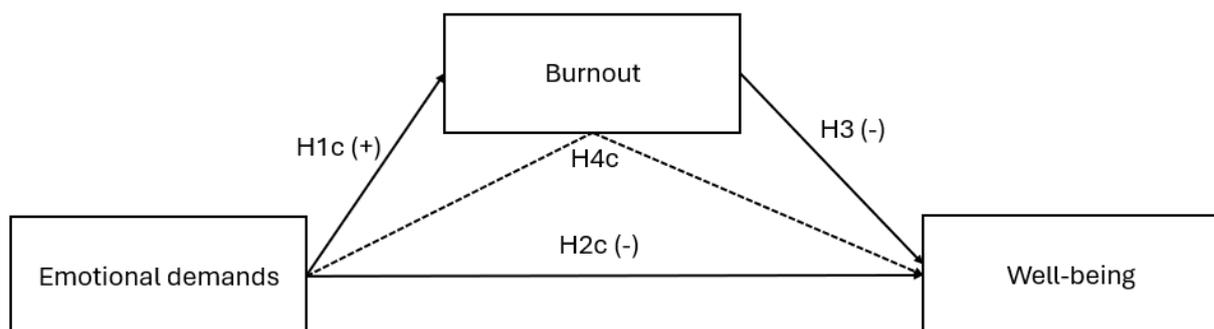
Note: The dashed line represents the mediated relationship, while the solid lines indicate direct relationships.

Table 16 *Regression results for direct effects of emotional demands, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Relationship	*R-sq*	Stand ardiz ed *β*	*t*	*p*	95% Confidence Interval	
						LLCI	ULCI
LT: H1c	ED→BURN	0,350	0,592	11,825	<0,001	0,458	0,641
LT: H2c	ED→WB	0,038	-0,200	-2,415	0,016	-0,457	-0,047
LT: H3	BURN→WB	0,038	0,009	0,096	0,016	-0,235	0,259
NOR: H1c	ED→BURN	0,248	0,498	11,647	<0,001	0,451	0,634
NOR: H2c	ED→WB	0,056	-0,013	-0,213	0,002	-0,184	0,148
NOR: H3	BURN→WB	0,056	-0,229	-2,943	0,002	-0,468	-0,093

Source: Compiled by author

Note. N = 635, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample; ED = emotional demands; BURN = burnout; WB = well-being.

The regression analysis of both samples revealed that emotional demands had a significant positive effect on burnout (NOR: $\beta = 0,498$, $t = 11,647$, $p < 0,001$; LT: $\beta = 0,592$, $t = 11,825$, $p = <0,001$), indicating that higher emotional demands is associated with higher levels of burnout among Norwegian and Lithuanian teachers. The model explained 24.8% of the variance in burnout ($R^2 = 0.248$), indicating a moderate explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 35% of the variance ($R^2 = 0.350$), indicating a strong explanatory power and suggesting that the model effectively explains differences in burnout levels within this sample. These results suggest that higher emotional demands decrease burnout among both Norwegian and Lithuanian teachers, and this **supports the Hypothesis 1c**.

The regression analysis of both Norwegian and Lithuanian samples revealed that emotional demands had a significant negative effect on well-being (NOR: $\beta = -0,013$, $t = -0,213$, $p = 0,002$; LT: $\beta = -0,200$, $t = -2,415$, $p = 0,016$), indicating that higher emotional demands are associated with lower levels of well-being among Norwegian and Lithuanian teachers. The model explained 5.6% of the variance in well-being ($R^2 = 0.056$), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 3.6% of the variance ($R^2 = 0.036$), indicating a very weak explanatory power. Therefore, **Hypothesis 2c is rejected for the Norwegian** sample, however, it is **supported in the Lithuanian** sample.

The regression analysis of Norwegian sample revealed that burnout had a significant negative effect on well-being (β = -0,229, t = -2,943, p = 0,002), indicating that higher burnout is associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that burnout had a non-significant positive effect on well-being (β = 0,009, t = 0,096, p = 0,116), indicating that burnout does not meaningfully predict well-being among teachers in Lithuania. The model explained 5.6% of the variance in well-being (R^2 = 0.056), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 3.6% of the variance (R^2 = 0.036), indicating a very weak explanatory power and suggesting that the model has limited ability to explain differences in well-being levels within this sample. Thus, **the Hypothesis 3 is supported for the Norwegian sample**, whereas it was **rejected for the Lithuanian sample**.

The next table displays the mediation results, illustrating the role of burnout in the relationship between emotional demands and well-being across the Lithuanian and Norwegian samples.

Table 17 *Mediation analysis results (Total, Direct, and Indirect Effects) for emotional demands, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Total effect of X on Y					
	Effect	**SE**	***t***	***p***	**LLCI**	**ULCI**
LT: H4c total	-0,245	0,085	-2,875	0,004	-0,077	-0,195
LT: H4c direct	-0,252	0,104	-2,415	0,016	-0,457	-0,047
LT: H4c indirect	-0,005	0,055			-0,106	0,108
NOR: H4c total	-0,170	0,073	-2,316	0,021	-0,314	-0,026
NOR: H4c direct	-0,018	0,084	-0,213	0,832	-0,184	0,148
NOR: H4c indirect	-0,114	0,039			-0,191	-0,039

Source: Compiled by the author

Note: N = 635, SE – standard error, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample.

In the Norwegian sample, the total effect of emotional demands on well-being was -0,170 ($p < 0.05$), indicating a statistically significant negative relationship. The indirect effect (X → M → Y) through burnout was also significant, suggesting that burnout mediates this relationship.

In contrast, for the Lithuanian sample, the total effect was -0,245 ($p < 0.05$), with the indirect effect statistically insignificant (LLCI = -0,106; ULCI = 0,108). However, the strength of the mediation effect (standardized coefficient -0,114 vs. -0,005) differs between the two groups, implying that burnout plays a stronger mediating role in Norway compared to Lithuania. Thus, the **Hypothesis 4c is supported for the Norwegian sample**, while it is **rejected for the Lithuanian sample**.

3.4.4 Effects of digital job resources

The analyses were conducted in two stages. First, direct effects among digital job resources, burnout, and well-being were tested using regression analysis. Second, a mediation analysis was performed to examine whether burnout mediates the relationship between digital job resources and well-being. The results for both the Lithuanian and Norwegian samples are presented below. Figure 5 illustrates both the direct and indirect effects, while the detailed results for the Lithuanian and Norwegian samples are presented in Table 18 (direct effects) and Table 19 (mediation analysis).

Figure 5 *Conceptual model of direct and mediated relationships among digital job resources, burnout, and well-being*
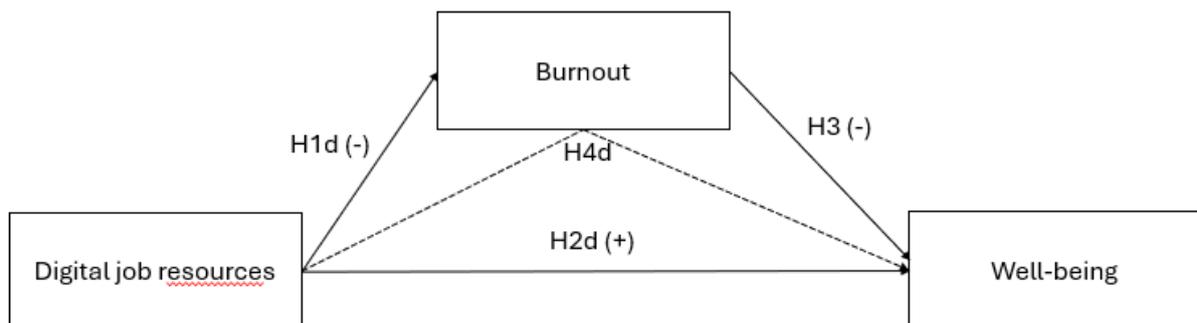
Note: The dashed line represents the mediated relationship, while the solid lines indicate direct relationships.

Table 18 *Regression results for direct effects of digital job resources, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Relationship	R-sq	Standardized β	t	p	95% Confidence Interval	
						LLCI	ULCI
LT: H1d	DJR→BURN	0,021	0,144	2,193	0,029	0,019	0,359
LT: H2d	DJR→WB	0,034	-0,150	-2,788	0,006	-0,456	-0,079
LT: H3	BURN→WB	0,034	-0,088	-1,153	0,006	-0,322	0,084
NOR: H1d	DJR→BURN	0,004	0,066	1,215	0,225	-0,066	0,279
NOR: H2d	DJR→WB	0,057	-0,036	-0,617	0,001	-0,297	0,155
NOR: H3	BURN→WB	0,057	-0,233	-3,450	0,001	-0,450	-0,123

Source: Compiled by author

Note. N = 635, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample; DJR = digital job resources; BURN = burnout; WB = well-being.

The regression analysis of Norwegian sample revealed that digital job resources had a non-significant positive effect on burnout ($\beta = 0,066$, $t = 1,215$, $p = 0,225$). Meanwhile, the regression analysis of Lithuanian sample revealed that digital job resources had a significant positive effect on burnout ($\beta = 0,144$, $t = 2,193$, $p = 0,029$), indicating that higher digital job resources are associated with higher levels of burnout among Lithuanina teachers. The models of both samples explained 0.4% and 2.1% of the variance in burnout (NOR: $R^2 = 0.004$; LT: $R^2 = 0.021$), indicating a very weak explanatory power for teachers in Norway and Lithuania, and suggesting that the models have limited ability to explain differences in burnout levels within the samples. Thus, **hypothesis 1d is rejected in either sample**, as the model is non-significant for teachers in Norway, while in the Lithuanian sample digital job resources increase burnout.

The regression analysis of both Norwegian and Lithuanian samples revealed that digital job resources had a significant negative effect on well-being (NOR: $\beta = -0,036$, $t = -0,617$, $p = 0,001$; LT: $\beta = -0,150$, $t = -2,788$, $p = 0,006$), indicating that higher digital job resources are associated with lower levels of well-being among Norwegian and Lithuanian teachers. The model explained 5.7% of the variance in well-being ($R^2 = 0.057$), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 3.6% of the variance ($R^2 = 0.034$), indicating a very weak explanatory power. The results show that digital job

resources negatively impact well-being in both the Norwegian and Lithuanian samples, indicating that **Hypothesis 2d is not supported**.

The regression analysis of both Norwegian and Lithuanian samples revealed that burnout had a significant negative effect on well-being (NOR: β = -0,233, t = -3,450, p = 0,001; LT: β = -0,088, t = -1,153, p = 0,006), indicating that higher burnout is associated with lower levels of well-being among Norwegian and Lithuanian teachers. The model explained 5.7% of the variance in well-being (R^2 = 0.057), indicating a weak explanatory power for teachers in Norway. Regarding teachers in Lithuania, the model accounted for 3.4% of the variance (R^2 = 0.034), indicating a very weak explanatory power and suggesting that the model has limited ability to explain differences in well-being levels within this sample. Thus, **the Hypothesis 3 was supported for the Norwegian sample**, whereas it was **rejected for the Lithuanian sample**.

The next table displays the mediation results, illustrating the role of burnout in the relationship between digital job resources and well-being across the Lithuanian and Norwegian samples.

Table 19 *Mediation analysis results (Total, Direct, and Indirect Effects) for digital job resources, burnout, and well-being in the Lithuanian and Norwegian samples*

Hx	Total effect of X on Y					
	Effect	**SE**	***t***	***p***	**LLCI**	**ULCI**
LT: H4d total	-0,290	0,094	-3,073	0,002	-0,475	-0,104
LT: H4d direct	-0,267	0,096	-2,788	0,006	-0,456	-0,079
LT: H4d indirect	-0,013	0,013			-0,042	0,009
NOR: H4d total	-0,101	0,115	-0,879	0,380	-0,328	0,125
NOR: H4d direct	-0,071	0,115	-0,617	0,538	-0,297	0,155
NOR: H4d indirect	-0,015	0,014			-0,046	0,009

Source: Compiled by the author

Note: N = 635, SE – standard error, LLCI – lower level confidence interval, ULCI – upper level confidence interval; LT = Lithuanian sample; NOR = Norwegian sample.

In the Norwegian sample, the total effect of digital job resources on well-being was -0,101 (p = 0.380), indicating a statistically insignificant negative relationship. The indirect effect (X → M → Y) through burnout was not statistically significant (LLCI = -0,046; ULCI = 0,009), suggesting that burnout does not mediate this relationship. In contrast, for the Lithuanian sample, the total

effect was -0,290 (p < 0.05), with the indirect effect also statistically insignificant (LLCI = -0,042; ULCI = 0,009). Therefore, this suggests that burnout does not play a mediating role in the relationship between digital job resources and well-being in either country and the **Hypothesis 4d is rejected**.

3.5 Summary and discussion of the empirical research results

Four hypotheses (12 sub-hypothesis) were put forward in this master's thesis, therefore the aim of the study was to determine the impact of job demands and digital job resources on burnout and well-being, and how burnout affects well-being. The results are summarized in Table 20.

**Table 20** *Results of hypothesis testing of both samples*

Construct	Hypothesis	Sub-hypothesis	Results for NOR sample	Results for LT sample
Work pressure	Work pressure will increase burnout (H1a), decrease well-being (H2a), and burnout will mediate the relationship between work pressure and well-being (H4a).	H1a	**Supported** BURN=0.64+0.48(WP)	**Supported** BURN=1.01+0.42(WP)
		H2a	**Supported** WB=3.98-0.16(WP)	**Rejected**
		H4a	**Supported**	**Rejected**
Cognitive demands	Cognitive demands will increase burnout (H1b), decrease well-being (H2b), and burnout will mediate the relationship between cognitive demands and well-being (H4b).	H1b	**Supported** BURN=0.19+0.40(CD)	**Supported** BURN=1.00+0.27(CD)
		H2b	**Rejected**	**Rejected**
		H4b	**Supported**	**Rejected**
Emotional demands	Emotional demands will increase burnout (H1c), decrease well-being (H2c), and burnout will mediate the relationship between emotional demands and well-being (H4c).	H1c	**Supported** BURN=0.59+0.50(ED)	**Supported** BURN=0.53+0.59(ED)
		H2c	**Rejected**	**Supported** WB=3.59-0.20(ED)
		H4c	**Supported**	**Rejected**
Digital job resources	Digital job resources will decrease burnout (H1d), increase well-being (H2d), and burnout will mediate the relationship between digital job resources and well-being (H4d).	H1d	**Rejected**	**Rejected**
		H2d	**Rejected**	**Rejected**
		H4d	**Rejected**	**Rejected**
Burnout	Burnout will negatively influence well-being.	H3	**Supported** WB=3.98-0.16(WP) WB=3.82-0.07(CD) WB=3.42-0.01(ED) WB=3.69-0.04(DJR)	**Rejected**

Source: Compiled by author.

Note: WP = work pressure; CD = cognitive demands; ED = emotional demands; BURN = burnout; DJR = digital job resources; WB = well-being; LT = Lithuanian sample; NOR = Norwegian sample.

Additionally, four regression models were developed to examine the direct and indirect relationships among the study variables. Each model presents the estimated regression coefficients for the relevant predictors and outcomes, as illustrated in Figures 6–9.

Figure 6 *Comparative regression model of work pressure, burnout, and well-being in Lithuanian and Norwegian teacher samples*
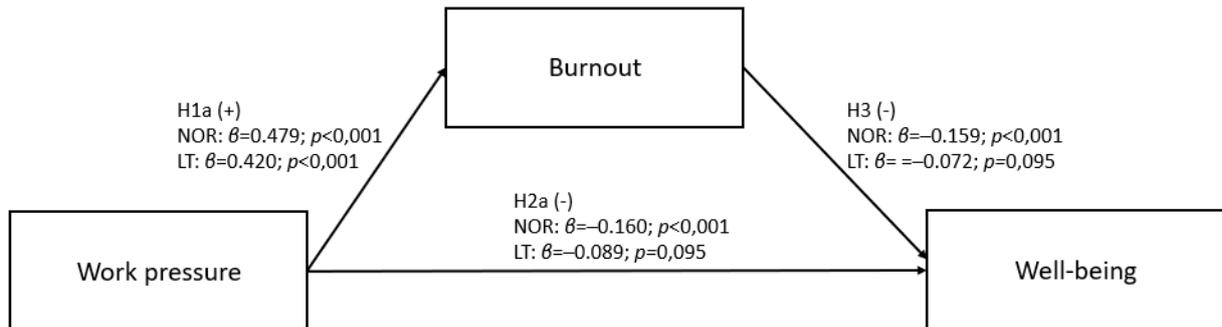
Note: LT = Lithuanian sample; NOR = Norwegian sample; β = standardized regression coefficient; p = model significance (p-value)

Figure 7 *Comparative regression model of cognitive demands, burnout, and well-being in Lithuanian and Norwegian teacher samples*
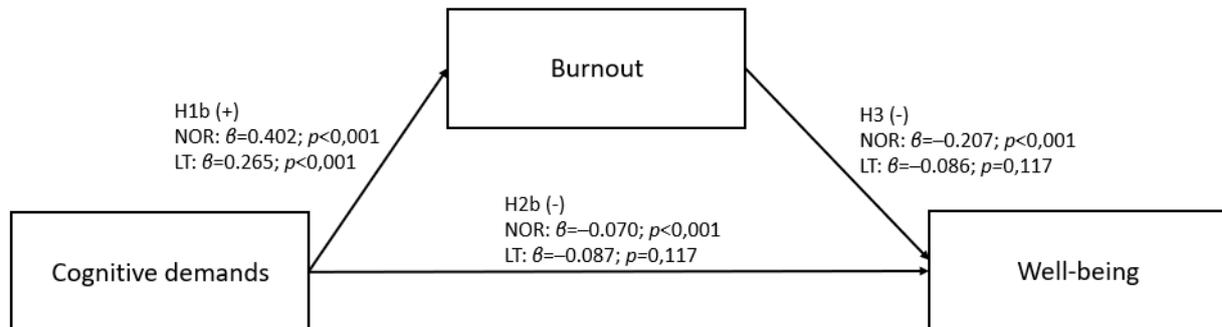
Note: LT = Lithuanian sample; NOR = Norwegian sample; β = standardized regression coefficient; p = model significance (p-value)

Figure 8 *Comparative regression model of emotional demands, burnout, and well-being in Lithuanian and Norwegian teacher samples*

Note: LT = Lithuanian sample; NOR = Norwegian sample; β = standardized regression coefficient; p = model significance (p-value)

Figure 9 *Comparative regression model of digital job resources, burnout, and well-being in Lithuanian and Norwegian teacher samples*
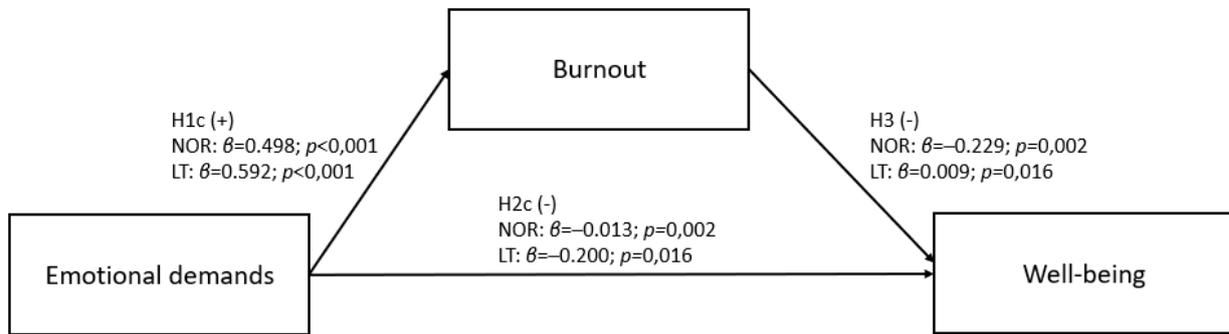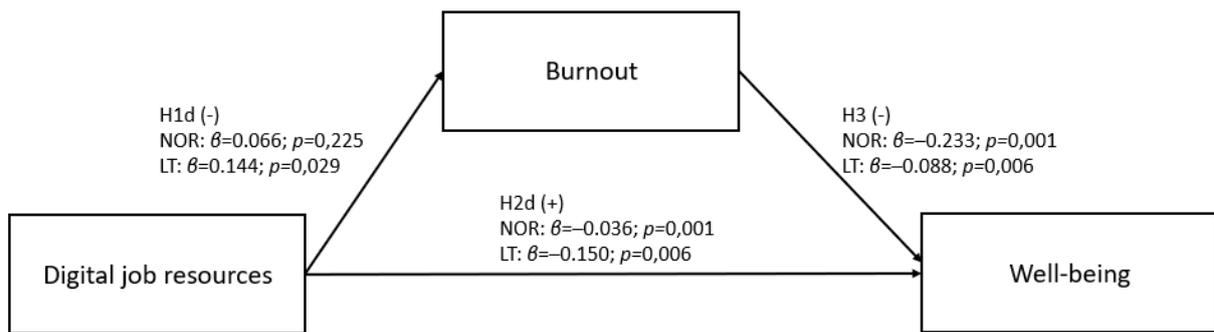

Note: LT = Lithuanian sample; NOR = Norwegian sample; β = standardized regression coefficient; p = model significance (p-value)

Based on the results obtained, regarding Norwegian sample, five of regression analysis sub-hypotheses (H1a, H2a, H1b, H1c, H3) were accepted, and four sub-hypotheses were rejected (H2b, H2c, H1d and H2d). Regarding Lithuanian sample, four of regression analysis sub-hypotheses (H1a, H1b, H1c, H2c) were accepted, and five sub-hypotheses were rejected (H2a, H2b, H1d, H2d and H3).

With respect to the mediation models, the results showed that the Norwegian sample confirmed three mediation sub-hypotheses (H4a, H4b, H4c), while only one was not supported (H4d). In contrast, none of the mediation sub-hypotheses (H4a, H4b, H4c, H4d) were supported in the Lithuanian teachers' sample.

The study found that for Norwegian sample work pressure and cognitive demands had a significant negative effect on well-being, while for Lithuanian sample work pressure and cognitive demands had a non-significant negative effect on well-being. Furthermore, the regression analysis of Norwegian sample revealed that higher burnout is associated with lower levels of well-being among Norwegian teachers. Meanwhile, the regression analysis of Lithuanian sample revealed that burnout does not meaningfully predict well-being among teachers in Lithuania. Additionally, the regression analysis of Norwegian sample revealed that digital job resources had a non-significant positive effect on burnout. By comparison, the regression analysis of Lithuanian sample revealed that higher digital job resources are associated with higher levels of burnout among Lithuanian teachers. Finally, the regression analysis revealed that higher digital job resources were associated with lower levels of well-being only in the Lithuanian sample, whereas in the Norwegian sample this effect was not statistically significant, as the 95% confidence interval included zero.

The study also found that in the Norwegian sample burnout mediates the relationships between work pressure, cognitive and emotional demands and well-being. At the same time, in the Lithuanian sample none of the relationships between the variables were mediated by burnout. The relationship between digital job resources and well-being was not mediated by burnout in either of the samples.

4. DISCUSSION

This study examined the influence of work pressure, cognitive and emotional demands and digital job resources on burnout and well-being in the context of teachers in two countries. This study contributes to the development of JD-R theory in the context of educators in different countries, with digitalization as a job resource.

When discussing demographic characteristics of the teaching workforce, the data of Lithuanian teachers in this study coincides with Teaching and Learning International Survey (TALIS) 2024, which shows that Lithuanian teachers are over 50 years old and have more than 20 years of work experience. The teacher population in Lithuania is one of the oldest in the world. Regarding the average age of teachers in Norway, TALIS 2024 data show that the average age of teachers in Norway has decreased by about two years since 2018 and is now 43, while according to this study, it is 41 (OECD, 2025).

With regard to the variables examined in this study, previous studies discuss digitalization at work both as a job demand and as a job resource (e.g., Day et al., 2010; Scholze & Hecker, 2023), whereas in this study it was examined only as a job resource, based on the assumption that after Covid-19 and the accelerated adoption of digital technologies (e.g. Baber, 2023; Blume, 2020; Díaz-Arce & Loyola-Illescas, 2021; Pozo-Rico et al., 2020), employees, in this case – teachers, already have sufficient digital literacy (Gümüş & Kukul, 2023) to use digital tools effectively. In other words, several studies have confirmed the positive impact of digitalization on employees, reducing burnout (M. Chen et al., 2022) and increasing well-being (Stang-Rabrig et al., 2022). The results of this study showed that digitalization is a demand for teachers, increasing burnout and reducing well-being in both Lithuania and Norway. This result is consistent with the conclusion that teachers often lack sufficient digital competencies (Gümüş & Kukul, 2023) and technological support, making digital tools an additional cognitive and emotional burden (Caena & Redecker, 2019). The authors emphasize that technology integration without proper preparation can cause stress and hinder professional success, and The European Framework for the Digital Competence of Educators (DigCompEdu framework) was created to reduce these challenges (Caena & Redecker, 2019). Additionally, digital competences are important because teachers' digital skills play a key role in enabling them to use technology effectively and efficiently in and outside the classroom and to teach students how to use technology (Gümüş & Kukul, 2023).

Other contextual factors that may have influenced these results include the average age of teachers, the quality of implementation of digitalization in the countries' education systems, school support, or low digital literacy (Díaz-Arce & Loyola-Illescas, 2021). People who experience

constant internal conflict at work, find themselves in a new and unfamiliar work environment where they are required to be highly efficient are at risk of burnout (Abromaitienė & Stanišauskienė, 2015). Therefore, in this study, digitalization was a factor that had a negative impact on well-being, and thus digitalization is not a resource but a demand, as it is still a new thing that teachers have to learn, considering their average age – the average age of both samples is 45. Teachers face a set of profession-specific demands (Nasvytienė & Balčaitytė, 2009; Stočkus, 2014) and in order to meet these demands, teachers must change in line with changes in the educational environment (Navaitienė & Danilovienė, 2017). This study demonstrates that change is not easily managed by teachers, and that digitalization constitutes one of the significant job demands they face.

The positive correlation between work pressure (K. Z. Li et al., 2024), cognitive (Varol et al., 2021) and emotional demands (Vammen et al., 2019) and teacher burnout found in previous studies coincides with the findings of this study, which show that the job demands increase teacher burnout in both Lithuania and Norway. In terms of cognitive demands, TALIS 2024 data show that adapting teaching to the diverse needs of students in Lithuania and Norway is a particularly significant source of stress. More than 50% of teachers in these countries indicate that modifying lessons for students with special educational needs causes them stress, significantly exceeding the OECD average (37%). This shows that teachers in both Lithuania and Norway face greater challenges in adapting to the different learning needs of their students (OECD, 2025).

Although previous studies have found a negative relationship between work pressure (Skaalvik & Skaalvik, 2018; Viac & Fraser, 2020), cognitive (Bakker & Demerouti, 2017; Pozo-Rico et al., 2020) and emotional demands (Angelini et al., 2024; Kariou et al., 2021) and teacher well-being, the results of this study comparing the two countries differ because a country's cultural dimensions may impact job characteristics and well-being (Van Veldhoven et al., 2017). Among Lithuanian teachers, emotional demands had a direct negative impact on well-being, while work pressure and cognitive demands had no significant effect. This is consistent with the literature showing that emotional labor and intense emotion regulation are a major source of stress in some cultural contexts (Kariou et al., 2021; Smith et al., 2025), and it is paradoxical that being responsible for children's education and well-being often gives job satisfaction, but it is not uncommon for educators to feel emotionally drained (Žydžiūnaitė & Rutkienė, 2024). Additionally, approximately 60% of Lithuanian teachers report being held responsible for students' social and emotional well-being as a source of stress (OECD, 2025). In contrast, in this study Norwegian teachers' well-being was strongly impacted by work pressure, and research

shows that the Norwegian worklife and professional well-being of workers is strongly based on participation, democracy and collective decision-making (Martinsone, Jensen, et al., 2024). This may be interpreted as an indication that greater professional autonomy and democratic participation can create higher professional responsibility, which increases the feeling of pressure when demands become excessive. On the other hand, teacher collaboration is particularly active in Norway. More than 80% of Norwegian teachers discuss the learning progress of specific students at least once a month, and over 70% regularly exchange teaching materials with colleagues. This shows a strong culture of collaboration, which helps make sure teaching is consistent and students do better (OECD, 2025). Furtermore, cognitive demands revealed no consistent effect on well-being in both countries. These differences show that the impact of the same demands on well-being depends on the context, culture, organization of the education system, and teachers' experience.

Several limitations of this study should be acknowledged. The study relied on self-reported data of teachers, which may reflect their subjective perceptions and may differ from objective measures of performance outcomes. Additionally, differences in educational systems and cultural contexts between Lithuania and Norway may have influenced teacher's perceptions of job demands and digital resources. Future research should combine self-reflection data with objective indicators such as performance evaluations or administrative data. Attention should also be paid to work canditions (Martinsone, Rutkienė, et al., 2024) like professional collaboration, school climate, resources and support structure. Additionally, research is needed to explore digital competencies of teachers and motivation to acquire skills for effectively using digital tools. As an additional note for future research, expanding the research to include more countries or different educational contexts would increase the generalizability of the results and strengthen the international comparability of the research.

5. CONCLUSIONS AND RECOMMENDATIONS

1. Based on the analysis of the scientific literature, it can be stated that teachers' job resources are teaching and personal resources, support from colleagues, managers, and administrators, autonomy, control over work, access to information, an innovative school atmosphere, a social atmosphere, meaningful work, and digitalization. Digitalization in secondary education means the process of integrating digital technologies into everyday tasks in order to increase efficiency, effectiveness, and innovation.

2. After analysing the scientific literature, it was found that digitalization is integrated into the JD-R model. Digitalization is viewed both as a job demand and as a job resource. Since digitalization is seen as an independent and flexible facilitator of work, the literature suggests moving from a simple view of technology as a source of stress to a more nuanced view of technology as a resource. Digitalization can be a resource if teachers have digital competencies and the availability of adequate training, support, and appropriate conditions. Teachers who are more confident in using digital tools generally experience less burnout and greater well-being. For teachers, digitalization provides opportunities to improve lesson planning, deliver content in innovative ways, and simplify administrative tasks. Having digital competence also contributes to having meaningful work, which is an innate motivator.

3. The analysis of the scientific literature has shown that burnout among teachers is caused by workload and time pressure, discipline problems, unclear role expectations, lack of influence on decisions at the school level, lack of recognition, low pay, conflicts with colleagues, school management or parents, and constant stress. Since teaching is one of the professions most prone to burnout and stress, many teachers leave the profession because of imbalance between job demands and resources. Burnout among Lithuanian teachers is caused by constant education reforms, declining student numbers, difficulties in working with students from socially disadvantaged families, emotional difficulties, as well as low salaries, large class sizes, and long working hours. Teacher burnout in Norway is caused by high stress levels, micromanagement, increasing dependence on teamwork and perceived incompatibility of values in schools, heavy workloads, limited resources, and difficulties in meeting professional expectations.

4. Scientific literature emphasizes that teachers' well-being is at risk because Lithuanian teachers are experiencing curriculum updates and the inclusion of disabled students and linguistic diversity. To achieve well-being, teachers rely on problem-solving and taking

responsibility. Although there is a strong focus on employee health and safety, and the work culture is based on democratic principles and collective decision-making, Norwegian teachers also face challenges to their well-being, such as student discipline issues, changes in education policy, increasing school sizes affect teachers' well-being.

5. Scientific literature emphasizes that digital well-being is becoming an important element in the context of teacher well-being when teachers use digital technologies. Digital tools provide significant assistance to teachers in expanding access to educational resources, planning lessons, communicating with students and their parents, managing assessments, and utilizing professional development opportunities. This optimises work processes, reduces workload and increases task efficiency, thereby facilitating work requirements. Digitalization has the potential to transform education by automating certain non-teaching tasks, improving data analysis and optimising online teaching.

6. During the research, it was found that digital job resources act as job demands, as digitalization increases burnout and reduces well-being for both Norwegian and Lithuanian teachers. This model contradicts the theoretical expectation that technology should facilitate work processes, but it is consistent with scientific literature claims that digital tools become demands when employees lack sufficient digital skills or adequate technological support. Based on this logic, it can be assumed that teachers in both Norway and Lithuania lack digital skills, training, or institutional support, which makes digital tools an additional burden. Teachers are forced to learn new technologies on their own, solve technical problems, and adapt digital solutions to their lessons without systematic assistance. In this case, digitalization does not reduce the workload but, on the contrary, increases cognitive and emotional stress, so these technologies act as demands and contribute to burnout and a decline in well-being.

In both Norway and Lithuania, burnout among teachers does not mediate the relationship between digital job resources and well-being. This means that the impact of digitalization on teachers' well-being is not indirect through burnout, but rather has a direct, independent negative effect. In other words, digital job resources themselves reduce well-being, even if the level of burnout remains unchanged. This is consistent with the assumption that digitalization becomes an additional workload and cognitive burden for teachers, which worsens rather than improves their well-being, especially when technical support or digital skills are lacking.

7. After conducting the research, it was found that in the case of both Norwegian and Lithuanian teachers, work pressure, cognitive and emotional demands increase burnout, which is consistent with the logic of JD-R theory. This theory states that greater job demands require more energy, constant psychological tension, and self-regulation efforts, which in the long run deplete employees' resources and increase emotional exhaustion. The teaching profession is particularly sensitive to these factors, as it is dominated by intensive cognitive processes (constant attention management, lesson planning, decision-making), high emotional demands (emotion regulation, student behaviour management), and work pressure. The fact that all three types of demands significantly predict burnout in both countries studied indicates that the nature of teachers' work is structurally similar: the profession is based on constant intense emotional and cognitive work, which, when excessive and insufficiently resourced, leads to higher levels of burnout. In other words, despite cultural or systemic differences between Norway and Lithuania, the impact of job demands on teachers' emotional exhaustion remains universal – the greater the demands, the more teachers tend to experience burnout.

8. Based on the results of the empirical study, it can be stated that burnout reduces the well-being of Norwegian teachers, but not that of Lithuanian teachers. These results can be explained by cultural, professional, and systemic differences between the two countries. In the case of Norwegian teachers, burnout has a weak negative effect on well-being, which is consistent with the traditional JD-R model argument that higher job demands reduce psychological well-being. This shows that the well-being of Norwegian teachers is more sensitive to burnout and that greater emotional exhaustion directly manifests itself in poorer well-being, lack of energy, and reduced job satisfaction. In the case of Lithuanian teachers, however, burnout had no significant impact on well-being, suggesting the existence of the so-called "teachers' paradox" mentioned in several studies, where teachers experience high levels of burnout but at the same time maintain a strong professional identity, a sense of meaning, and high job satisfaction. In such cases, burnout does not always directly reduce their well-being, as other factors, such as professional autonomy, social support, intrinsic motivation, or community spirit, can act as protective resources that reduce the impact of burnout on well-being.

9. The results of the empirical study showed that the results of both countries reveal different patterns of the impact of job demands on teachers' well-being, indicating that not all demands contribute equally to a decline in well-being. In the case of Norwegian teachers,

work pressure directly reduces well-being, while cognitive and emotional demands have no significant effect. This model may indicate that Norwegian teachers' well-being is most sensitive to the direct pressure of work pace, deadlines, and workload, which affects well-being regardless of other demands. In the case of Lithuanian teachers, on the contrary, work pressure and cognitive demands do not have a significant impact on well-being, which may indicate that these forms of occupational stress are more normalized or compensated for by other job resources. However, emotional demands significantly reduce the well-being of Lithuanian teachers, suggesting that emotional labor – the constant regulation of emotions, management of student behaviour, and experience of emotional tension – is the main risk factor for well-being in this country. These results show that teacher well-being in different countries depends on different types of job demands, which may be related to cultural, professional, or organizational factors that determine which challenges teachers are most vulnerable to.

10. The results of the empirical study showed that, in the case of Norwegian teachers, burnout mediates the relationship between work pressure and well-being, which means that higher work pressure reduces well-being both directly and through increased burnout. In addition, burnout mediates the effect of cognitive and emotional demands on well-being, so these demands reduce well-being only indirectly because they increase the level of burnout. In the case of Lithuanian teachers, the mediating effect does not manifest itself, i.e., burnout does not mediate the effects of work pressure, cognitive and emotional demands on well-being, which indicates that work pressure and cognitive demands do not directly or indirectly affect teachers' well-being. However, emotional demands have a direct negative impact on the well-being of Lithuanian teachers, regardless of burnout. These findings show that teacher well-being in Norway is more vulnerable to the burnout mechanism, while in Lithuania, well-being is determined more by the intensity of emotional work than by other job demands or exhaustion.

Recommendations

1. The study revealed that digital job resources act as demands and reduce teachers' well-being. Therefore, it is recommended that teachers be provided with systematic technical support and regular training in digital competencies. Similar conclusions are presented by Pozo-Rico et al. (2020), showing that technology training reduces teachers' stress levels and emotional exhaustion.

2. Since job demands (work pressure, cognitive and emotional demands) significantly increase teacher burnout in both countries, it is recommended to review Norwegian and Lithuanian teacher workload standards. Skaalvik & Skaalvik (2021a) note that high work demands predict teacher burnout.

3. Given that mediation effects of burnout have not proven effective in Norway, it is recommended that qualitative research be conducted to help understand the contextual factors that can mitigate the impact of burnout on teachers' well-being.

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SUMMARY

104 pages, 9 figures, 203 references.

The main purpose of this master thesis is to empirically assess the relationship between job demands, digital job resources and teacher well-being, as well as the mediating effect of burnout on this relationship.

The Master thesis consists of four main parts: the analysis of literature, the research and its results, discussion, conclusions and recommendations.

Literature analysis reviews the job demands-resources (JD-R) model, digitalization as a resource, burnout and well-being in educational context. Additionally, the impact of JD-R and digitalization on teacher burnout and well-being were reviewed.

Following the literature analysis, the author carried out research about both Lithuanian and Norwegian teachers' job demands (work pressure, cognitive and emotional demands), digital job resources, burnout and well-being. A total of 636 teachers responded to the surveys – 301 teachers from Lithuania and 335 teachers from Norway. The main purpose of the questionnaire was to find out about the use of digitalization by teachers in Lithuania and Norway, their experiences of burnout and well-being, and what influences these variables. Furthermore, the results of the research were compared between these countries. The results of the research were statistically processed with the SPSS programme batch. Cronbach's Alpha coefficient was used to determine the alignment of the Likert scales'; in all cases, it was higher than 0.7 which indicates that the scales used were consistent. Regression and mediation analysis methods were used to determine the relationships between variables.

The performed research revealed that digitalization is not a resource but a demand for teachers in both Lithuania and Norway. Job demands increased burnout among teachers in both countries, confirming the JD-R theory. Work pressure directly reduces the well-being of Norwegian teachers, while emotional demands have the greatest negative impact on the well-being of Lithuanian teachers.

The conclusions and recommendations, summarizing the concepts of the main literature analysis and the results of the study, provide insights into digitalization, burnout, and well-being among teachers in Lithuania and Norway. The author believes that the results of the study could provide useful guidelines for the education systems of Lithuania and Norway in their efforts to improve digitalization processes, make more effective use of digital resources in education, reduce teacher burnout, and enhance their well-being.

SANTRAUKA

104 puslapiai, 9 paveikslai, 203 šaltiniai.

Pagrindinis šio magistro darbo tikslas – empiriškai įvertinti darbo reikalavimų, skaitmeninių darbo išteklių ir mokytojų gerovės santykį, taip pat išsekimo mediacinį poveikį šiam santykiui.

Magistro darbas susideda iš keturių pagrindinių dalių: literatūros analizės, tyrimo ir jo rezultatų, diskusijos, išvadų ir rekomendacijų.

Literatūros analizėje apžvelgiamas darbo reikalavimų ir išteklių (JD-R) modelis, skaitmenizavimas kaip išteklius, perdegimas ir gerovė švietimo kontekste. Be to, buvo apžvelgtas JD-R ir skaitmeninimo poveikis mokytojų perdegimui ir gerovei.

Išnagrinėjus literatūrą, autorius (-ė) atliko tyrimą apie Lietuvos ir Norvegijos mokytojų darbo reikalavimus (darbo spaudimą, kognityvinius ir emocinius reikalavimus), skaitmeninius darbo išteklius, perdegimą ir gerovę. Apklausose dalyvavo iš viso 636 mokytojai – 301 mokytojas iš Lietuvos ir 335 mokytojai iš Norvegijos. Pagrindinis klausimynų tikslas buvo išsiaiškinti, kaip mokytojai Lietuvoje ir Norvegijoje naudoja skaitmeninimą, kokia yra jų patirtis, susijusi su perdegimu ir gerove, ir kas daro įtaką šiems kintamiesiems. Be to, buvo palyginti šių šalių tyrimo rezultatai. Tyrimo rezultatai buvo statistiškai apdoroti naudojant SPSS programą. Likert skalės suderinamumas buvo nustatytas naudojant Cronbach alfa koeficientą; visais atvejais jis buvo didesnis nei 0.7, o tai rodo, kad naudotos skalės buvo nuoseklios. Kintamųjų tarpusavio ryšiai buvo nustatyti taikant regresijos ir mediacinės analizės metodus.

Atliktas tyrimas parodė, kad skaitmenizavimas nėra išteklius, o reikalavimas mokytojams tiek Lietuvoje, tiek Norvegijoje. Darbo reikalavimai padidino mokytojų išsekimą abiejose šalyse, patvirtindami JD-R teoriją. Darbo spaudimas tiesiogiai mažina Norvegijos mokytojų gerovę, o emociniai reikalavimai daro didžiausią neigiamą poveikį Lietuvos mokytojų gerovei.

Išvadose ir rekomendacijose, apibendrinus pagrindinės literatūros analizės koncepcijas ir atlikto tyrimo rezultatus, pateikiamos įžvalgos apie skaitmenizavimą, Lietuvos ir Norvegijos mokytojų perdegimą ir gerovę. Autorius (-ė) mano, kad tyrimo rezultatai galėtų suteikti naudingų gairių Lietuvos ir Norvegijos švietimo sistemoms ketinant tobulinti skaitmenizavimo procesus, efektyviau panaudoti skaitmeninius darbo išteklius švietime, mažinant pedagogų perdegimą ir stiprinant jų gerovę.

ANNEXES

Annex 1. Quantitative Research Questionnaire in Lithuanian

Mielas (-a) Mokytojau (-a),

Kviečiu Jus dalyvauti **Vilniaus universiteto** studentės atliekamame tyrime **„Darbo reikalavimų ir skaitmeninių išteklių poveikis mokytojų perdegimui ir gerovei: lyginamoji analizė.“** Šio tyrimo tikslas – išsiaiškinti, kaip darbo krūvis, emociniai ir pažintiniai reikalavimai bei skaitmeninių technologijų naudojimas daro įtaką Lietuvos ir Norvegijos mokytojų perdegimui ir gerovei.

Jūsų dalyvavimas yra labai svarbus, nes Jūsų patirtis padės geriau suprasti, su kokiais iššūkiais susiduria mokytojai Lietuvoje ir kaip galima pagerinti jų darbo sąlygas. Tyrimo rezultatai prisidės prie sprendimų, galinčių sumažinti darbo krūvį, padėti efektyviau naudoti skaitmeninius įrankius bei gerinti mokytojų emocinę sveikatą ir darbo aplinką.

Atsakydami į klausimus, prašome remtis savo asmeniniais pojūčiais ir patirtimi. Pasitikėkite savo pirmąja intuicija – ilgai nemąstykite ir nekeiskite atsakymų.

Teisingų ar neteisingų atsakymų nėra – mums svarbiausia Jūsų nuoširdi nuomonė.

Klausimynas yra anoniminis, o visi atsakymai bus naudojami tik moksliniams tikslams, užtikrinant duomenų konfidencialumą. Klausimyno pildymas užtruks apie 7 minutes.

Dėkoju už Jūsų laiką ir indėlį į šį svarbų tyrimą! Jūsų patirtis yra neįkainojama siekiant sukurti geresnę ir palaikančią aplinką mokytojams.

Rezultatai yra prieinami tik autoriui

Darbo reikalavimai

1. Įvertinkite teiginius susijusius su darbo reikalavimais, kur: 1=niekada; 2=kartais; 3=reguliariai; 4=dažnai; 5=labai dažnai.

Eil. Nr.	Teiginiai	Niekada	Kartais	Reguliariai	Dažnai	Labai dažnai
1.	Ar jums tenka dirbti greitai?	1	2	3	4	5
2.	Ar turite per daug darbo?	1	2	3	4	5
3.	Kaip dažnai jums tenka dirbti ypač intensyviia, kad spėtumėte iki nustatyto termino?	1	2	3	4	5
4.	Ar dirbate esant laiko spaudimui?	1	2	3	4	5
5.	Ar jūsų darbas reikalauja daug koncentracijos?	1	2	3	4	5
6.	Ar jūsų darbas reikalauja ypatingo dėmesio ir tikslumo?	1	2	3	4	5
7.	Ar laikote savo darbą protiškai labia įtemptu?	1	2	3	4	5
8.	Ar jūsų darbas reikalauja nuolatinio dėmesio?	1	2	3	4	5
9.	Ar jūsų darbas yra emociškai sekinantis?	1	2	3	4	5
10.	Ar darbe susiduriate su dalykais, kurie asmeniškai jus paliečia?	1	2	3	4	5
11.	Ar darbe susiduriate su emociškai įtemptomis situacijomis?	1	2	3	4	5
12.	Ar darbe susiduriate su mokiniais ar jų tėvais, kurie be perstojo skundžiasi?	1	2	3	4	5
13.	Ar darbe jums tenka susidurti su reikliais mokiniais ar jų tėvais?	1	2	3	4	5
14.	Ar jums tenka susidurti su mokiniais ar jų tėvais, kurie su jumis elgiasi nepagarbiai ir nemandagiai?	1	2	3	4	5

Skaitmeniniai darbo ištekliai

2. Toliau pateikti teiginiai susiję su Jūsų kasdieniu darbu. Prašome pasirinkti tinkamiausią atsakymo variantą pagal tai, kiek stipriai sutinkate su pateiktu teiginiu (1=visiškai nesutinku, 2=nesutinku, 3=nei sutinku nei nesutinku, 4=sutinku, 5=visiškai sutinku).

Eil. Nr.	Teiginiai	Visiškai	Nesutinku	Nei sutinku nei nesutinku	Sutinku	Visiškai sutinku
1.	Aš naudoju skaitmenines technologijas savo kasdienių darbo užduočių planavimui.	11	22	33	44	55
2.	Aš naudoju skaitmenines technologijas savo kasdienių darbo užduočių atilikimui.	11	22	33	44	55
3.	Aš naudoju skaitmenines technologijas dokumentavimui.	11	22	33	44	55
4.	Aš naudoju skaitmenines technologijas komunikavimui.	11	22	33	44	55
5.	Aš naudoju skaitmenines technologijas informacijos paieškai.	11	22	33	44	55

Perdegimas

3. Įvertinkite teiginius susijusius su perdegimu darbe. Pasirinkite tinkamiausią atsakymo variantą pagal tai, kaip dažnai jaučiatės pagal pateiktus teiginius, kur: 1=niekada, 2=retai, 3=kartais, 4=dažnai, 5=visada.

Eil. Nr.	Teiginiai	Niekada	Retai	Kartais	Dažnai	Visada
1.	Darbe jaučiuosi psichologiškai išsekęs (-usi)	1	2	3	4	5
2.	Po darbo dienos man sunku atgauti jėgas	1	2	3	4	5
3.	Darbe jaučiuosi fiziškai išsekęs (-usi)	1	2	3	4	5
4.	Sunkiai randu noro dirbti*	1	2	3	4	5
5.	Nekenčiu savo darbo	1	2	3	4	5
6.	Netikiu, kad mano darbas svarbus kitiems	1	2	3	4	5
7.	Darbe man sunku sutelkti dėmesį	1	2	3	4	5
8.	Darbe man sunku aiškiai mąstyti	1	2	3	4	5
9.	Dirbant man sunku susikaupti	1	2	3	4	5
10.	Darbe jaučiuosi negalintis (-i) kontroliuoti savo emocijų	1	2	3	4	5
11.	Darbe taip emociškai sureaguoju, kad neatpažįstu savęs	1	2	3	4	5
12.	Darbe netyčia galiu perdėtai emociškai sureaguoti	1	2	3	4	5

Gerovė

4. Prie kiekvieno iš penkių teiginių nurodykite, kuris iš jų labiausiai atitinka Jūsų savijautą per pastarąsias dvi savaites. Atkreipkite dėmesį, kad didesni skaičiai reiškia geresnę savijautą (5=visą laiką; 4=dažniausiai; 3=daugiau nei pusę laiko; 2=mažiau nei pusę laiko; 1=kartais; 0=niekada).

Eil. Nr.	Teiginiai	Visą laiką	Dažniausia .	Daugiau nei pusę	Mažiau nei pusę laiko	Kartais	Niekada
1.	Jaučiausi linksmas (-a) ir geros nuotaikos.	5	4	3	2	1	0
2.	Jaučiausi ramus (-i) ir atsipalaidavęs (-usi).	5	4	3	2	1	0
3.	Jaučiausi aktyvus (-i) ir energingas (-a).	5	4	3	2	1	0
4.	Kėliausi jausdamasis (-i) žvalus (-i) ir pailsėjęs (-usi).	5	4	3	2	1	0
5.	Mano kasdienis gyvenimas buvo kupinas dalykų, kurie mane domina.	5	4	3	2	1	0

5. Jūsų lytis?
   a. Vyras
   b. Moteris
   c. Kita
6. Jūsų amžius?
   (įrašykite suėjusių metų skaičių)
7. Mokytojo kvalifikacinė kategorija (prašome pasirinkti variantą, kuris geriausiai apibūdina Jūsų profesinį statusą):
   a. Mokytojas
   b. Vyresnysis mokytojas
   c. Mokytojas metodininkas
   d. Mokytojas ekspertas
8. Kokio lygmens mokinius mokote?
   a. Pradinio ugdymo mokytojas (mokote 1–4 klasių mokinius)
   b. Pagrindinio ir (ar) vidurinio ugdymo mokomųjų dalykų mokytojas (mokote 5–12 klasių mokinius)
9. Mokyklos tipas, kurioje dirbate:
   a. Pradinė mokykla (1-4 kl.)

       b. Progimnazija (5-8 kl.)

       c. Gimnazija (9-12 kl.)

10. Išsilavinimo lygis

       a. Vidurinis išsilavinimas

       b. Bakalauras

       c. Magistras

       d. Daktaro laipsnis

       e. Kita

11. Prašome nurodyti, kiek metų iš viso dirbate mokytoju

(įrašykite suėjusių metų skaičių)

Annex 2. Quantitative Research Questionnaire in Norwegian

Kjære lærer,

Jeg inviterer deg til å delta i en undersøkelse utført av en student ved Vilnius universitet (Litauen) med tittelen «Arbeidskrav og digitale ressursers påvirkning på utbrenthet og trivsel blant lærere: en komparativ analyse». Målet med denne studien er å finne ut hvordan arbeidsbelastning, emosjonelle og kognitive krav, samt bruken av digitale teknologier, påvirker utbrenthet og trivsel blant lærere i Litauen og Norge.

Din deltakelse er veldig viktig, da din erfaring vil bidra til en bedre forståelse av hvilke utfordringer lærere i Norge møter, og hvordan arbeidsforholdene kan forbedres. Resultatene fra studien vil legge grunnlaget for tiltak som kan redusere arbeidsbelastningen, fremme en mer effektiv bruk av digitale verktøy, og forbedre lærernes emosjonelle helse og arbeidsmiljø.

Når du svarer på spørsmålene, ber jeg deg basere svarene på dine personlige opplevelser og erfaringer. Vennligst stol på din første instinkt – tenk ikke for lenge og endre ikke svarene.

Det finnes ingen riktige eller gale svar – det viktigste er din oppriktige mening.

Spørreskjemaet er anonymt, og alle svar vil kun bli brukt til vitenskapelige formål med full sikring av konfidensialiteten. Det tar omtrent 7 minutter å fullføre.

Takk for din tid og bidrag til denne viktige studien! Din erfaring er uvurderlig for å skape et bedre og mer støttende miljø for lærere.

Resultatene er kun tilgjengelige for forfatteren.

Jobbkrav

1. Vennligst vurder påstandene knyttet til arbeidskrav ved å bruke følgende skala: 1=aldri, 2=noen ganger, 3=regelmessig, 4=ofte, 5=veldig ofte.

Nr.	Utsagn	Aldri	Av og til	Regelmessig	Ofte	Veldig ofte
1.	Må du jobbe i høyt tempo?	1	2	3	4	5
2.	Har du for mye arbeid å gjøre?	1	2	3	4	5
3.	Hvor ofte må du jobbe ekstra hardt for å nå en frist?	1	2	3	4	5
4.	Jobber du under tidspress?	1	2	3	4	5
5.	Krever arbeidet ditt mye konsentrasjon?	1	2	3	4	5
6.	Krever arbeidet ditt spesiell oppmerksomhet eller presisjon?	1	2	3	4	5
7.	Anser du arbeidet ditt som veldig mentalt krevende?	1	2	3	4	5
8.	Krever arbeidet ditt din konstante oppmerksomhet?	1	2	3	4	5
9.	Er arbeidet ditt emosjonelt krevende?	1	2	3	4	5
10.	Blir du i arbeidet ditt konfrontert med ting som berører deg personlig?	1	2	3	4	5
11.	Møter du emosjonelt ladede situasjoner i arbeidet ditt?	1	2	3	4	5
12.	Håndterer du elever eller foreldre som stadig klager?	1	2	3	4	5
13.	Må du i arbeidet ditt forholde deg til krevende elever eller foreldre?	1	2	3	4	5
14.	Må du håndtere elever eller foreldre som ikke behandler deg med tilstrekkelig respekt og høflighet?	1	2	3	4	5

Digitale arbeidsressurser

2. Følgende påstander er relevante for ditt daglige arbeid. Velg det mest passende svaret basert på hvor enig du er i påstanden (1 = helt uenig, 2 = uenig, 3 = verken enig eller uenig, 4 = enig, 5 = helt enig).

Nr.	Utsagn	Helt uenig	Uenig	Verken enig eller uenig	Enig	Helt enig
1.	Jeg bruker digitale teknologier for å planlegge mine daglige arbeidsoppgaver.	1	2	3	4	5
2.	Jeg bruker digitale teknologier for å utføre mine daglige arbeidsoppgaver.	1	2	3	4	5
3.	Jeg bruker digitale teknologier til dokumentasjon.	1	2	3	4	5
4.	Jeg bruker digitale teknologier til kommunikasjon.	1	2	3	4	5
5.	Jeg bruker digitale teknologier til informasjonsinnhenting.	1	2	3	4	5

Utbrenthet

3. Vennligst vurder utsagnene knyttet til utbrenthet på jobben. Velg det mest passende svaret basert på hvor ofte du føler deg utbrent, der: 1 = aldri; 2 = sjelden; 3 = av og til; 4 = ofte; 5 = alltid.

Nr.	Utsagn	Aldri	Sjelden	Av og til	Ofte	Alltid
1.	Jeg føler meg mentalt utmattet på job.	1	2	3	4	5
2.	Etter en arbeidsdag synes jeg det er vanskelig å gjenvinne energien min.	1	2	3	4	5
3.	Jeg føler meg fysisk utmattet på job.	1	2	3	4	5
4.	Jeg sliter med å finne entusiasme for arbeidet mitt.	1	2	3	4	5
5.	Jeg føler en sterk motvilje mot jobben min.	1	2	3	4	5
6.	Jeg er kynisk til hva arbeidet mitt betyr for andre.	1	2	3	4	5
7.	På jobb har jeg problemer med å holde fokus.	1	2	3	4	5
8.	Jeg sliter med å tenke klart på job.	1	2	3	4	5
9.	Når jeg jobber, har jeg problemer med å konsentrere meg.	1	2	3	4	5
10.	På jobb føler jeg meg ute av stand til å kontrollere følelsene mine.	1	2	3	4	5
11.	Jeg kjenner meg ikke igjen i måten jeg reagerer emosjonelt på jobb.	1	2	3	4	5
12.	På jobb kan jeg overreagere uten å mene det.	1	2	3	4	5

Velvære

4. For hver av de fem påstandene, vennligst angi det alternativet som best reflekterer hvordan du har følt deg **de siste to ukene**. Vennligst merk at høyere tall indikerer bedre velvære (5 = hele tiden; 4 = oftest; 3 = mer enn halvparten av tiden; 2 = mindre enn halvparten av tiden; 1 = noen ganger; 0 = aldri).

Nr.	Utsagn	Hele tiden	Oftest	Mer enn halvparten	Mindre enn	Av og til	Aldri
1.	Jeg har følt meg munter og i godt humør.	5	4	3	2	1	0
2.	Jeg har følt meg rolig og avslappet.	5	4	3	2	1	0
3.	Jeg har følt meg aktiv og energisk.	5	4	3	2	1	0
4.	Jeg våknet og følte meg uthvilt og opplagt.	5	4	3	2	1	0
5.	Mitt daglige liv har vært fylt med ting som interesserer meg.	5	4	3	2	1	0

5. Kjønn
   a. Mann
   b. Kvinne
   c. Annet

6. Vennligst skriv din alder i år
   (skriv inn antall fylte år)

7. Hva er din lærerrolle?
   a. Barneskolelærer
   b. Ungdomsskolelærer
   c. Videregående skolelærer
   d. Annet

8. Hvilken type skole jobber du på?
   a. Barneskole
   b. Ungdomsskole
   c. Videregående skole
   d. Annet

9. Hva er din fullførte utdanning?
   a. Videregående skole
   b. Bachelorgrad
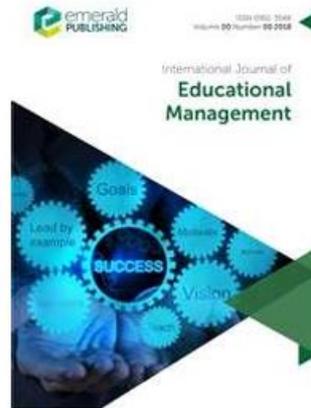   c. Mastergrad

d. PhD

e. Annet

10. Hvor mange år har du arbeidserfaring som lærer? Vennligst spesifiser totalt antall år du har jobbet som lærer

(skriv inn antall fylte år)

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Figure 1.vsdx

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