

# Teachers' Occupational Well-being in the Era of Digitalisation: Resources, Competences, and Demands

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## Biography

The author obtained her bachelor's degree at Azerbaijan University of Languages in Teaching English as a Foreign Language and went on to gain a master's in educational management (MAEM) at ELTE University. Her research interests cover teacher professional development, curriculum development, and higher education systems.

## Abstract

The sudden outbreak of the COVID-19 pandemic in 2020 caused tremendous shifts in the delivery of education. Teachers were required to develop digital skills: they had to learn to manage online classes, use online tools, and change their way of communication. This sudden shift brought stressors too. Sitting in front of computers to manage online classes required teachers to be flexible, adaptable, and to adapt to new skills. How well teachers dealt with the new situation affected how lessons were delivered, making it necessary to look at occupational well-being considering recent innovations.

To gain better insights into the topic, a systematic literature review within a conceptual framework is undertaken here. The framework encompasses physical and mental, cognitive, subjective, and social well-being. This paper argues that while having to use ICT could be overwhelming for teachers, the impact of technological integration may have positive, negative, and neutral impacts on educator's well-being.

*Keywords:* Teacher well-being, professional development, quality teaching, ICT

## Introduction

This paper reviews and analyses the literature to establish how the advancement and application of new technologies have affected teachers' well-being. Since the outbreak of COVID-19 needed fast integration of new technologies, teachers' emotional and psychological states have become important to research considering the latest advancements. We could hypothesise that teachers with lower levels of skills using technologies suffer more from burnout, compared to those equipped with competencies to deal with technological demands. Yet, the finding of this paper showed that it is not always the case, and that the integration of new technologies might have contradictory effects on teachers.

Factors related to job and work surroundings that potentially cause stress are commonly referred to as *stressors* (e.g., Betoret, 2006). Teacher's stress is understood as the negative emotions arising from various aspects of teaching (Collie et al., 2012; Kyriacou 1987, 2001; Liu & Onwuegbuzie 2012). Several studies conducted in various countries indicate that teaching is an occupation that can cause significant stress (Borg & Riding, 1991; Travers & Cooper, 1996; Chan 2002; Desrumaux et al., 2015; Hakanen et al., 2006; Johnson et al., 2005; Liu & Onwuegbuzie, 2012; Montgomery & Rupp 2005; Stoeber & Rennert, 2008). Although teachers experiencing high levels of job stress still find a degree of job satisfaction, that satisfaction can be diminished by factors such as unclear job responsibilities, limited autonomy, and conflicts with both students and colleagues (Greenglass & Burke, 2003).

Teacher effectiveness, which typically improves during the first five years in the profession, has a direct correlation with student outcomes. Often teachers do not, however remain in their positions long enough to fully develop skills and benefit from experience. Findings from studies by Ingersoll (2001), and Ingersoll and Perda (2011) indicate that there is a high turnover of teaching staff compared to lawyers, pharmacists, engineers, and other professionals. The initial years of teaching witness remarkably high rates of teacher turnover; almost half of novice teachers quit work during the first five years of their career in education (Grissmer & Kirby, 1992, 1997; Hafner & Owings, 1991; Ingersoll, 2003). Teacher workload is a significant factor in why they leave the profession. The fact that sixty-nine percent of primary school teachers find marking to be unmanageable should raise significant concerns for government (National Education Union, 2021).

Stress is the primary reason cited by teachers for leaving their jobs, which is reported twice as often as low compensation. According to Farber's research (1991), between five and twenty percent of U.S. teachers were estimated to be 'burned out' at any given time, particularly after twenty-five years. According to a survey conducted by the American Federation of Teachers (2017), 5,000 teachers were asked about their quality of work life; sixty-one percent of teachers and school staff reported that their jobs were "always" or "often" stressful. In the U.K., full-time teachers worked an average of forty-eight hours per week, including weekends and evenings, nineteen percent longer than the average in other countries (forty hours). Whilst the time teachers spend on delivering lessons is approximately equal, that spent on planning lessons, creating assessments, marking and grading, and other duties varies, and contributes to the lengthy work hours (Sellen, 2016). According to Wilson (2002), several other factors contribute to teacher's stress, including disruptive student behaviour, excessive workload, school policies, unsupportive colleagues, and inadequate support from school leadership.

The teaching profession in general, and work that teachers do is accompanied by isolation, rising expectations placed upon them, and conflicting demands. When teaching, teachers need to balance many complex demands and needs. Parents consistently push teachers to focus on their children, but teachers must consider the needs of *all* the learners in the class. Teachers need to cover all the topics, assess student's work, plan lessons, deal with misbehaviour, and help colleagues; a never-ending list (Hargreaves & Fullan, 2012).

Some of the consequences of these factors are decreasing job satisfaction, (Collie et al., 2012; Desrumaux et al., 2015), a lack of teachers' commitment to daily duties (Klassen et al., 2013; Skaalvik & Skaalvik, 2016), and loss of motivation to continue in the job (Skaalvik & Skaalvik, 2011a), leading to resignations (Weiss, 1999). Teachers experiencing high levels of

stress as a result of workload and student misbehaviour are more likely to experience negative health and career-related outcomes, such as emotional exhaustion, depersonalisation, reduced personal accomplishment, increased absenteeism, and leaving the teaching profession (Betoret, 2006; Jepson & Forrest, 2006; Kyriacou, 2001). The effects of excessive demands and prolonged stress may also diminish teacher self-efficacy (Klassen et al., 2013; Skaalvik & Skaalvik, 2016) and increase negative impacts (Betoret, 2009), depression, and psychosomatic reactions (Skaalvik & Skaalvik, 2015). Retirement only accounts for approximately one-third of teacher attrition, with the majority of turnover occurring before retirement age, due to dissatisfaction with the conditions of teaching (Sutcher, Darling-Hammond & Carver-Thomas, 2016).

## **Methodology**

This research paper uses a literature review approach to explore the impact of the digitalisation of education on teacher well-being. The study draws upon various scholarly articles and reports to examine the possible link between teacher stress, job demands, digital competencies, and well-being. The Job Demands-Resources (JD-R) theory serves as the main theoretical framework to gain insights into how job demands and resources influence teacher well-being in the context of digitalisation. The paper also synthesises existing literature to identify the factors affecting teacher well-being in the digital age.

## **Theoretical Framework**

This research paper relies upon the *Job Demands-Resources* (JD-R) theory, an extension of the Job Demands-Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker & Demerouti, 2007) and is influenced by job stress and job design theories. This theory illustrates how job demands and resources can have both individual and combined effects on job stress and motivation. Furthermore, the JD-R theory suggests reversed causal effects: while disengaged employees may gradually increase their job demands, motivated employees proactively utilize their job resources to maintain their engagement (Bakker & Demerouti, 2014).

This model has been used to predict job ‘burnout’ (Bakker et al., 2005, 2008; Demerouti et al., 2001), levels of organisational commitment, enjoyment and engagement at work (Bakker, Van Veldhoven, & Xanthopoulou, 2007; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2010; Hakanen, Bakker, & Schaufeli, 2006), connectedness (Lewig, Xanthopoulou, Bakker, Dollard, & Metzger, 2007). Furthermore, the JD-R model has been used to anticipate outcomes stemming from these factors, such as absences due to sickness. (Bakker, Demerouti, De Boer, & Schaufeli, 2003a; Clausen, Nielsen, Gomes Carneiro, & Borg, 2012; Schaufeli, Bakker, & Van Rhenen, 2009), and occupational duties (Bakker et al., 2008; Bakker, Demerouti, & Verbeke, 2004). Using the JD-R theory, we can gain insight, clarify, and anticipate outcomes regarding occupational well-being and job effectiveness.

According to JD-R theory, work characteristics can be classified into two groups: job demands and job resources. Job demands are aspects of a job that require ongoing physical and psychological effort and are associated with certain physiological or psychological expenditure. These demands are related to the physical, psychological, social, or organisational aspects of the job (Demerouti et al., 2001). In this context, pressure at work and emotionally demanding interactions with parents, students, or other school staff are examples. Moreover, the JD-R theory posits that there are mutual influences between work characteristics and the health and motivation of employees, developing over time. The health and motivation of employees also

affects the work environment, highlighting the dynamic nature of the relationship between that and well-being. The JD-R theory guides interventions started by individuals or organisations, which can target personal resources, job demands, or resources (Bakker & Demerouti, 2014).

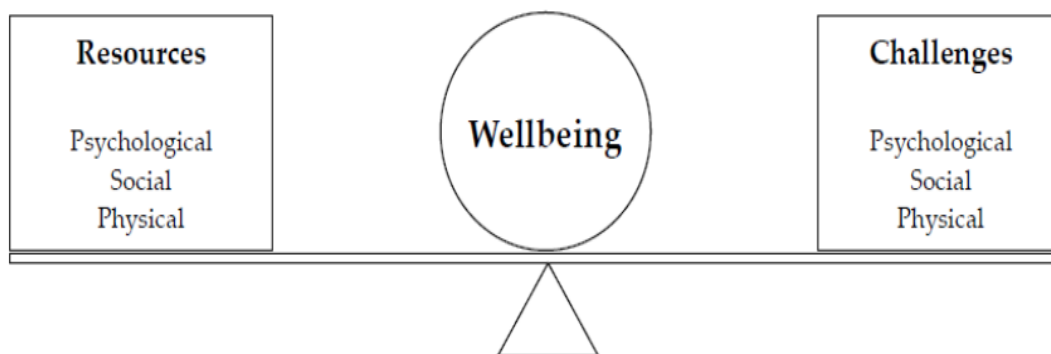
### Defining Teacher Well-being

For this paper, the definition of well-being by Dodge et al. (2012) is used, the balance point between an individual's resource pool and the challenges faced. Stable well-being is when individuals have the psychological, social, and physical resources they need to meet a particular challenge. When individuals face more challenges than resources, the see-saw dips, along with their well-being, and vice-versa (see Figure 1). Throughout the years, well-being has been characterised in different ways (Allin & Hand, 2014), and several researchers warn against the negative outcomes of not considering teachers' well-being (Bubb & Early, 1996; Klusmann, et. al, 2008; Spilt, Koomen, & Thijs, 2011; Viac & Fraser, 2020), from physical, mental, cognitive, social, subjective, and psychological perspectives.

Physical well-being includes psychosomatic symptoms, marital satisfaction, medication use, physical health, lifestyle behaviours (Burke & Greenglass, 1996); mental health as having the ability to emotionally withstand challenges and difficulties while maintaining a sense of dignity, other-, and self- worth that allows individuals to experience joy and navigate through feelings of pain, disappointment, and sadness (Nurunnabi, et. al., 2020). Cognitive well-being refers to skills and competencies necessary for people to perform efficiently at work (Horn et al., 2010) as well as the confidence to carry out tasks or achieve goals (Schleicher, 2018). Subjective wellbeing covers aspects such as life satisfaction, the absence of negative emotions, the presence of optimism, and positive emotions (Diener & Chan, 2011). Social well-being is an evaluation of the individual's situation and role within society encompassing their ability to integrate with others, make societal contributions, experience a sense of unity, fulfil their potential, and be accepted by others (Keyes, 1998). Psychological well-being covering a person's assessment of their level of happiness, contentment with their physical and mental well-being, and how it connects to certain psycho-social factors such as life or job satisfaction (Garg & Rastogi, 2009).

**Figure 1**

*Well-being diagram adapted from Dodge et al. (2012).*



### Digitalisation of Education and Teacher Skills

According to Bubb (2004), the changing education sphere leads to increased demand for

high-quality teaching and professionalism. The intensification of educational innovations and new ways of thinking in a knowledge society has also heightened teachers' self-expectations (Collinson et al., 2009). The outbreak of COVID-19 intensified the need for developing teachers' digital skills, and it is essential for teachers to continually learn and improve their skills (Sancar, Atal & Deryakulu, 2021).

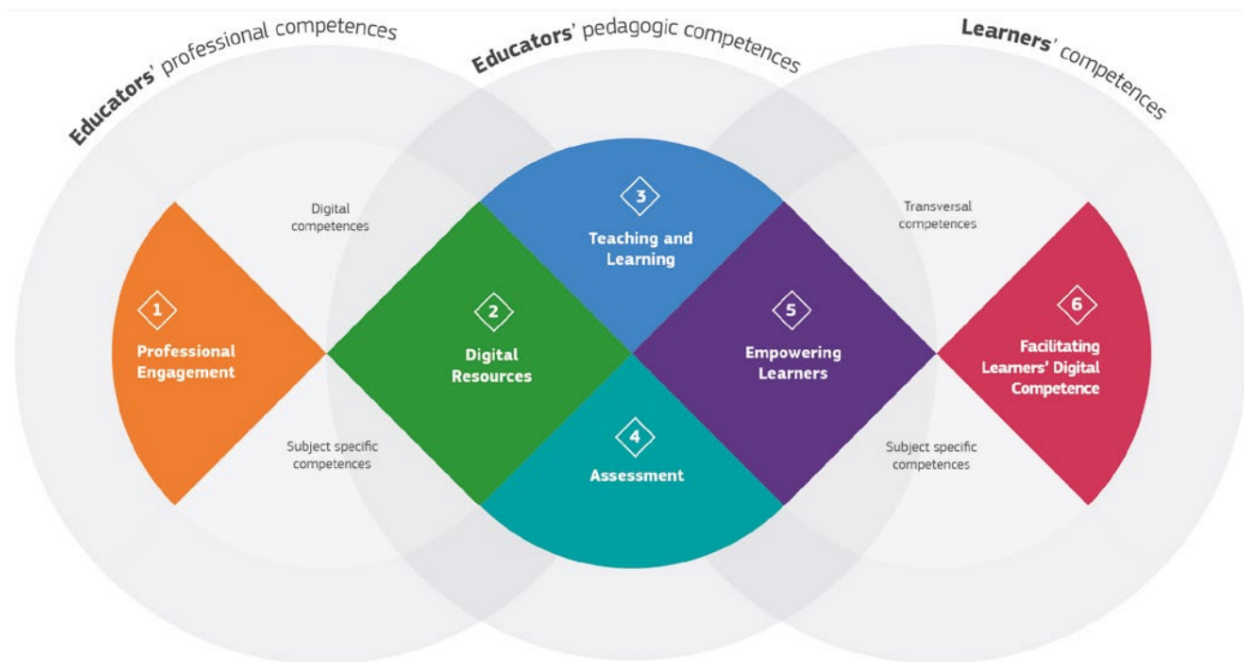
Research shows that incorporating ICT into teaching and learning can improve academic achievement in various fields, including science, mathematics (Culp, Honey, & Mandinach, 2005; Zhou, Brouwer, Nocente, & Martin, 2005), and language learning (Zhao, 2003). Teachers, however require specialised training to integrate ICT effectively (Jacobsen, Clifford & Friesen, 2002; Markauskaite, 2007; Yildirim, 2000).

While technology can help learning through the use of ICT, there are ongoing debates about its effectiveness (Thorvaldsen & Madsen, 2020). Research shows that while access to digital tools in educational settings is inevitable with the digital revolution, it is how teachers use these tools that significantly affects students' learning rather than the availability of the technology (Thorvaldsen & Madsen, 2020). The OECD (2016) has stated that it is difficult to develop innovative teaching methods without focusing on improving digital competencies for both educators and pupils. The report emphasises that just incorporating digital technologies does not result in better educational achievements. The key to success lies in teachers' capabilities in using digital tools efficiently to aid learning. "Technology can amplify great teaching, but great technology cannot replace poor teaching...", (OECD, 2015, p.4). The quality of teaching is contingent upon the quality of implementing digital media and technology, and the value they bring to the teaching process.

The *DigCompEdu Framework* seeks to define and describe the digital competencies that are relevant for educators, encompassing twenty-two fundamental competencies organised into six areas (see Figure 2). Area 1 pertains to the broader professional context, including educators' use of digital technologies for interactions with colleagues, learners, parents, and other stakeholders, as well as their continuing professional development and the betterment of the organization. Area 2 focuses on competencies related to the effective and responsible use, creation, and sharing of digital resources for learning. Area 3 addresses the management and coordination of digital technologies in teaching and learning. Area 4 concerns the use of digital strategies for assessment. Area 5 emphasises the potential of digital technologies for learner-centred teaching and learning approaches. Finally, Area 6 outlines the pedagogical approaches needed to support students' digital competences (Redecker, 2017).

## **Figure 2**

*DigCompEdu Framework adapted from Punie & Redecker, 2017*



From the listed requirements for a teacher, it is clear that teachers need deliberate and comprehensive preparation to meet their responsibilities in the digital era. Competent educators should create well-structured and well-managed classroom environments that promote learning opportunities and enhance student engagement (Creemers & Reezigt, 1996). Educators are expected to have a comprehensive understanding of the vast range of ICT available and their application in educational settings (Katz & Macklin, 2007; National Higher Education ICT Initiative, 2003).

Studies examining teachers' professional competencies suggest that the quality of instruction is influenced by two key factors: teachers' objective knowledge (including pedagogical content knowledge, or *PCK*), and their motivational beliefs (Kunter et al., 2013). Aside from personal attitudes and self-efficacy beliefs, motivational beliefs are important indicators of intention to use, and frequency of use in the classroom (Farjon et al., 2019).

### **The Relationship Between Digitalisation and Teacher Well-being**

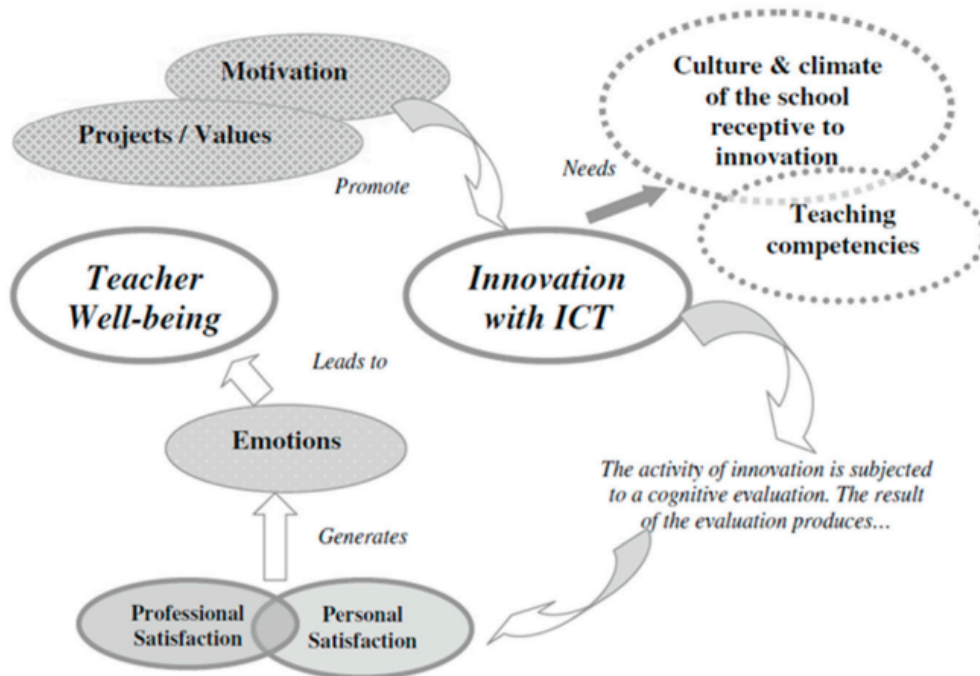
The integration of digital technologies into teaching highlights the importance of digital well-being as a significant aspect of teachers' psychological, social, and physical well-being in education (Dodge, et al., 2012). For the *Joint Information Services Committee* (Jisc, 2019) digital wellbeing is "...a term used to describe the impact of technologies and digital services on people's mental, physical, social and emotional health." Educators' needs for competence and autonomy are strongly related to teacher well-being in this context (Ryan & Deci, 2000).

Incorporating digital technologies into traditional classrooms can worsen existing stressors experienced by teachers in their work environment, such as inadequate training, a shortage of necessary technological tools, low teacher ability, and negative attitudes toward technology. These factors might also include feelings of incompetence at work (Harrell & Bynum, 2018). When teachers use digital technologies to enhance their teaching and learning practices, many factors and characteristics may affect their well-being. These factors can have neutral, favourable, or unfavourable impacts on teacher well-being (Passey, 2021).

In education research there is a tendency to pay more attention to the negative impact of digital technologies on teacher well-being, rather than the positive (Passey, 2021). The briefing paper (Winchester, 2019) for the U.K. House of Lords is an example where adverse effects such as cyberbullying, the use of social media, and screen time, were highlighted.

At present, there is insufficient, focused research on the digital well-being of teachers. In several recent development projects, special attention is on teacher well-being as an outcome. According to an evaluation of a teacher training program involving both Finnish and Brazilian educators, the authors noted that teachers intentionally developed collaborative expertise and emotional well-being by using innovative digital solutions, which resulted in beneficial effects on their teaching methods (Rymmin, et al., 2020). De Pablos-Pons, et al. (2013) summarised and modelled teacher well-being whilst considering the use of advanced digital technologies (see Figure 3).

**Figure 3**



*Note:* Model relating teacher well-being with innovative uses of digital technologies  
From De Pablos (2011)

The researchers identified seven crucial factors related to maintaining a balance of well-being for teachers who use digital technologies in the context of innovation:

- Background motivations to apply high-tech devices
- Project and values that are identified or foreseen
- School culture and climate
- Teacher skills

- Personal fulfillment
- Career fulfillment
- Generated emotions

These are not the only factors playing a role in supporting well-being when using technological devices but should be in harmony with other factors.

## **Discussion**

Through the literature review, the key findings suggest a nuanced relationship between digitalisation and teacher well-being. Factors such as managing student behaviour, access to sufficient resources, training, and support systems play a crucial role in deciding how teachers navigate the demands of digitalisation. Moreover, the study underscores the need for a comprehensive approach to supporting teacher well-being, which involves addressing not only technological issues but also organisational and cultural factors within educational institutions.

## **Conclusion**

To conclude, it is undeniable that the new era has brought new requirements for educators and they are required to keep up with it which places a remarkably high focus on integrating technologies. Having based the research on the JD-R theory, it could be supposed that since the obligation to integrate new technologies demands new tools as well as contemporary competencies, teachers should be far more overloaded. Using technologies does bring extra work, however, our findings show that technologies might have both negative and positive effects on teachers, and even in some cases, the impact could be neutral (Passey, 2021). In addition, the well-being of a teacher does not merely depend on teachers' skills and competencies, but the factors of school culture and climate (De Pablos-Pons, et. al., 2013).

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