

The Digital Advantage: Digital Competence and Work Engagement Among Private School Teachers

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Abstract - Teachers now work in a professional context that has been changed by the growing use of digital technologies in the educational environment. The technological demands of teaching have grown with the addition of digital platforms, online learning, electronic assessment systems, the use of AI applications and technology-mediated communication. In turn, teachers are expected to have the skills to use digital technologies, and to make them fruitful in professional and pedagogical contexts. Meanwhile, ongoing work engagement is significant for teachers' effectiveness and professional engagement. This conceptual paper explores the possible link between digital competence and work engagement of private school teachers. Based on the Job Demands – Resources theory, the paper suggests that digital competence can be a personal professional resource for teachers in order to better meet the demands of their job related to technology. Digital literacy, digital communication and collaboration, digital content creation, digital pedagogical competence, and digital safety and digital problem-solving are five key dimensions of digital competence that are included in the conceptual framework. Vigor, dedication and absorption are the three components of work engagement. Based on this, it is suggested that the application of digital competence in the teaching process, with the appropriate organizational conditions, can be a factor in a positive and active work experience for teachers. It offers guidance for further empirical research and implications for teacher development, digital transformation and human resources practices in private schools.

Keywords: Digital Competence, Work Engagement, Private School Teachers, Educational Technology, Digital Transformation, Job Demands–Resources Theory

I.INTRODUCTION

The digital transformation is a key aspect of today's education. The widespread use of digital learning platforms, multimedia teaching materials, cloud-based applications, electronic assessment platforms and AI-supported technologies has changed teachers' implementation of multiple professional tasks. Teachers are also spending more and more time on technology in their classrooms, as well as lesson planning, assessment, communicating, collaborating, and professional development. This shift has enhanced the teachers' digital competence.

Digital competence in education is more than just computer literacy. It embodies the skill of recognizing, assessing, developing, share and use digital resources in a suitable way in professional and pedagogical settings. The growing evidence in recent research has highlighted the multidimensional nature of teacher Digital competence and the varying approaches that have been taken to represent the technological, pedagogical and professional dimensions. In a systematic review of quantitative research, Claro et al. (2024) found that the concepts and measures of digital competence presented by the in-service school teachers are significantly different.

Teachers' professional context also has an impact on the development of digital competence. Digital infrastructure, professional development, leadership support and opportunities to practice with technology may impact how teachers build and use their digital skills. Chiu et al (2024) explored teacher digital competence from a Self-Determination Theory perspective, and showed the importance of contextual and motivational factors in the development of teachers' digital competence.

In tandem with the growing technological requirements of teaching, there are also inquiries about teachers' psychological experiences of their teaching. Work engagement is a positive state at work that is defined as a sense of vigor, dedication and

absorption. For teachers in a digitalizing school, there can be opportunities and challenges with technology. The use of digital technologies can support teaching and communication, but can also create further learning needs and work and pressure to keep up with the changing nature of technology.

The existing studies give a preliminary evidence of the link between digital competence and work engagement. Sang et al. (2023) explored the link between the Digital competence of instructors and their levels of work engagement. Similarly, Briones et al. (2023) focused on digital competence and work engagement in secondary school teachers, and emphasised the importance of studying digital competence along with teachers' experiences at work.

The relationship is not necessarily straightforward, however. Technology can also generate new jobs demands. Previous studies on teachers' technology-related work conditions have revealed that technostrain can negatively impact on work engagement, and organizational support can be an important resource for teachers. This implies that the impact of digital transformation will be based on teachers' capacity to handle technology and also the assistance they receive in the organisation.

Private schools are one significant context to look at this. Expectations of teachers in private educational institutions may include digital lesson development, assessment with technology, electronic communication, and reporting and implementation of new educational technologies. This attitude leads to a growing relevance of digital competence in the teachers' daily professional activities.

In view of this, a conceptual model related to digital competence and work engagement of private school teachers is developed in this paper. The framework is based on the Job Demands-Resources theory, with the goal of adding to the educational technology/organisational behaviour/teacher development nexus.

II.LITERATURE REVIEW

Digital Competence Digital competence is defined as the ability to use digital technologies effectively, appropriately, critically and responsibly. In the field of education, it refers to technological knowledge and ability to use technology in education and professional activities.

As noted by Claro et al. (2024), digital competence of teachers has been defined in different ways and measured in a variety of ways. The characteristics of the teacher's digital competence as described in their review clearly exceed, exceedingly, and sometimes even exceed the mere technical skills.

Yang et al. (2023) also found that digital competence has several components of digital competence of K–12 teachers: information and data literacy, communication and collaboration, digital content creation, and safety and problem solving. These dimensions illustrate that digital competence of teachers entails both operative and higher order skills.

In the present paper, digital competence is conceptualised through six broad dimensions:

Literacy of digital information and data literacy.

Information and communication technology (ICT) for digital communication and collaboration.

Digital content creation

Digital pedagogical competence

Digital safety and responsibility

Digital problem solving

This multi-dimensional conceptualization is especially important for private schools as teachers are expected to use technology in more than a single aspect of their job, not just for instruction/class. This multidimensional conceptualization is especially important for private schools, because teachers are expected to use technology in more than one aspect of their job, not just for instruction/class.

B. Work Engagement

Work engagement is a positive psychological state related to work, characterized by the individual's energy, involvement and concentration in professional activities.

The three dimensions of teacher work engagement can be understood for teachers.

1. Vigor

Vigor is defined as energy, persistence and willingness to put in the effort in relation to work tasks.

2. Dedication

Dedication is a feeling of enthusiasm, importance, pride and commitment in a profession.

3. Absorption

Absorption is a focus of depth and participation in professional activities. In the field of education, work engagement is of particular importance because teachers' professional duties involve high cognitive, emotional and interpersonal investments.

Digital competency and work engagement.

This can be understood via the evolving nature of teachers' work and the digital competence. Teachers need to be equipped with appropriate skills for performing digital tasks when technology is used as a part of the professional tasks they do.

Sang et al., (2023), found that there was a strong relationship between digital competence of instructors and work engagement. This gives an empirical evidence for the inclusion of digital competence as a factor that is connected to positive work related experiences. The research that engaged teachers has also shown that digital competence is related to job engagement through the learning processes related to technology.

This implies that learning digital skills could have implications other than performance. Technology can, at the same time, generate new requirements, however. Teachers may feel pressure to learn new systems, to respond to online communication, to create digital content, and/or to deal with technology related issues. Hence, the digital competence and engagement should be considered in the broader context of the work environment.

III. THEORETICAL FOUNDATION

Job Demands–Resources Theory The Job Demands–Resources theory provides the theoretical foundation for the proposed conceptual framework. The theory separates between job demands and job resources. Job demands require sustained physical or psychological effort, whereas job resources facilitate goal achievement, reduce the impact of demands and support motivation.

Technology can be a job demand in digitally transforming schools, as teachers are expected to learn new skills, use digital technologies and systems and modify their approach to technological change. Digital competence may function as a personal professional resource that assists teachers in responding to these demands. The theoretical mechanism that is proposed can be written as: Digital competence is the need to carry out work activities with knowledge, understanding, and skills pertaining to digital technologies. Digital competence is the need to perform work activities with knowledge, understanding and skills relating to digital technologies.

This framework doesn't mean that, in order to be engaged, students need to be digitally competent. Instead, it suggests that digital competence can play a role in positive work-related experiences, provided that there is a suitable organisational context.

IV. DIGITAL COMPETENCE AS A PROFESSIONAL RESOURCE.

The main idea of this conceptual paper is that digital competence can be regarded as a professional resource.

A DCT can have advantages in terms of being able to:

- Locate digital information that is relevant;
- select appropriate technology;
- Create digital teaching resources;
- Interact with others via digital media;
- incorporate technology into learning goals;
- handle digital safety needs;
- and solve every day technological issues.

These abilities can help mitigate uncertainty and enable teachers to handle technology-related tasks.

Digital competence therefore has the potential to have an indirect effect on a more manageable and engaging work experience.

V. PROPOSED CONCEPTUAL FRAMEWORK

DIGITAL COMPETENCE



Six dimensions arranged as two rows:

- Information & Data Literacy
- Communication & Collaboration
- Digital Content Creation
- Pedagogical Competence
- Digital Safety
- Problem Solving



PROFESSIONAL RESOURCE



WORK ENGAGEMENT



Vigor | Dedication | Absorption

VI. PROPOSED PROPOSITIONS

Hypothesis 1: Digital competence has a positive correlation with teachers' work engagement in private schools. H1: Teachers' work engagement is positively related to digital competence in private school.

P2: Digital pedagogical competence helps teachers work engagement through the efficient use of the digital technologies in teaching activities. There is a positive relationship between

P3: Digital communication and collaboration competence and teachers' work engagement.

P4: Digital problem solving competency helps teachers to fulfill technology-related work needs and thus has a positive relationship with work engagement.

P5: organisational support reinforces the positive relationship between digital competence and work engagement.

VII. DISCUSSION

This proposed model offers a technology explanation of teachers' work engagement. The concept of Digital competence has been discussed in the past many times in conjunction with technology adoption, instruction and professional development. The current approach is to broaden this view and explore digital competence as a resource that can be used by teachers in their psychological engagement with the work. This relationship can be explained with the JD-R perspective.

Digital transformation presents more expectations, and teachers' digital competency might be one of the factors that affect the level of how well they meet these expectations. A teacher who has confidence in their ability to select digital resources, troubleshoot common issues and make technology a tool in the teaching process will have a different experience with technology than a teacher who does not have these skills. This does not mean engagement is a direct consequence of the digital competence.

There are several individual and organizational factors that are associated with work engagement. Teachers' work experiences can be affected by a range of factors, including school leadership, workload, infrastructure, professional autonomy, recognition and interpersonal relationships. So the proposed relationship must be seen within a wider framework of a digital working environment.

VIII. THEORETICAL IMPLICATIONS

The proposed framework is an addition to the existing body of literature in three ways. First of all, it puts the digital competence concept beyond technology-use to a professional tool.

Second, it relates educational technology with organizational behavior by relating digital competence to work engagement.

Third, it adopts the JD-R approach in the context of private-school teachers and gives insights into how digital competence could support teachers in dealing with job demands related to digital technologies.

IX. PRACTICAL IMPLICATIONS

The framework has implications for the management of private schools.

Digital Professional Development

Schools do not need to be dependent on one-off digital-development training sessions; they can offer ongoing digital-development programmes instead.

Pedagogical Technology Training

Training may be directed towards using technology as a tool to meet specific learning goals, as opposed to only learning how to operate the software.

Technical Support

Teachers can get technical support when they encounter technology-related challenges.

Digital Leadership

School leaders can motivate teachers to try technologies they would like to use and to disseminate their successful digital practices.

Human Resource Development

Digital competence can be integrated into teacher professional learning and development programmes.

X. FUTURE RESEARCH DIRECTIONS

The proposed framework offers several opportunities for empirical studies.

Future studies may focus on:

- the positive correlation between digital competence and work engagement;
- the individual contribution of each dimension of the digital competence;
- Organisational support as a moderator;
- and Digital self-efficacy as a mediator;
- and The moderating effect of teaching experience;
- digital leadership; technology-related stress;
- The differences between private and government schools;
- and differences among school boards.

Future studies can use Structural Equation Modelling to test the overall conceptual model.

XI. LIMITATIONS

The present paper is conceptual, and does not empirically test the proposed relationships. The framework has been drawn from the existing literature, both empirical and theoretical, and thus needs to be tested with primary data. Factors such as organisational infrastructure, leadership, teacher characteristics and technology requirements are other factors that could influence the relationship between digital competence and work engagement. The framework should be further explored in various educational contexts in future empirical research.

XII. CONCLUSION

Teachers have had to evolve to meet the new demands of the digital transformation in education. Teachers must adapt to the new demands of the digital transformation of education. The use of information and communication technologies (ICT) has therefore become an essential part of modern working activities. But it's not just about operating the digital technologies. The digital skills of teachers also can impact their ability to meet the demands of technology in the teaching profession.

This conceptual paper suggests that digital competence may be a personal professional resource, in the Job Demands–Resources framework. The proposed model relates digital competence to work engagement while acknowledging that organizational support is crucial for teachers to effectively leverage their technological skills.

The framework helps contribute to the field of educational technology research because it connects technological capability to a key organisational behaviour construct. It also serves as a starting point for future empirical studies of private school teachers and their conditions for positive professional experience, with the use of digital competence.

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