International Journal of Curriculum and Instructional Studies

15(2), 2025, 236-268

www.ijocis.com

Examining the Relationship between Teachers' Digital Competence and Career Satisfaction

Arzu Altın, Ministry of National Education, altin.arzu@gmail.com,

ORCID 0000-0002-0536-0393

Zühal Topcu, Gazi University, ztopcu06@gmail.com,

ORCID 0000-0003-4617-2716

Keywords

Teacher education
Teacher career
Digital competence
Career satisfaction

Article Info:

Research Article

Received : 19-05-2024
Accepted : 09-12-2025
Published : 31-12-2025

DOI: 10.31704/ijocis.1486452

Abstract

As digitalization increasingly shapes teachers' careers, the development of digital competencies brings about significant changes in both education systems and the labor market. This study aims to examine the relationship between teachers' perceptions of their digital competence and their career satisfaction, as well as to investigate whether these variables differ based on demographic factors. The research was conducted during the 2022-2023 academic year with 208 teachers working in public schools affiliated with the Ministry of National Education in Ankara, Türkiye. Data were collected using the Personal Information Form, the Digital Competence Scale for Educators, and the Career Satisfaction Scale. Data were analyzed using independent samples t-tests, one-way ANOVA, and Pearson correlation analysis. The findings indicate that the average digital proficiency score of teachers was 44.30, with the majority at the "integrator" level. The teachers' average career satisfaction score was found to be moderate ($\bar{X}$ = 3.04). The results showed that there were no statistically significant differences in digital proficiency and career satisfaction scores based on gender and position. A significant difference was found in digital proficiency scores according to education level, and it was observed that postgraduate teachers showed higher digital proficiency than those with a bachelor's degree. In addition, a significant difference was found in the perception levels of career satisfaction of teachers only according to the seniority variable. Furthermore, a low but statistically significant positive correlation was identified between teachers' perceptions of digital proficiency and their career satisfaction levels.

To cite this article: Altın, A., & Topcu, Z. (2025). Examining the relationship between teachers' digital competence and career satisfaction. *International Journal of Curriculum and Instructional Studies, 15*(2), 236-268. https://doi.org/10.31704/1486452

Introduction

Societies need to learn to live in a globalizing, digitalizing, intercultural and changing world (Ala-Mutka, 2011; Engzell et al., 2021; Romero García et al., 2020). With the rapid rise of online services impacting economic, political, cultural, and social spheres, societies face significant challenges in effectively utilizing Information and Communication Technologies (ICT). The labor market is undergoing a radical transformation due to relentless technological advancements. Digitalization has broadened the scope of the labor market and its qualification needs, while also influencing emerging generational issues. The gap between different generations working within the same organization has reached unprecedented depths (Nemeskeri et al., 2016). Consequently, achieving the desired goals in the 21st century requires the development of a workforce with the digital competencies necessary for creativity in knowledge production and expertise in problem-solving. For many individuals, the workplace is where they learn to use computer-based technologies and understand how they can be beneficial (Haddon, 2000). Those who are more digitally involved in their social lives are thought to have a comparative advantage over their digitally disadvantaged peers (Bergström, 2017). According to Rogers (2003), people with higher education levels are more likely to adopt technological innovations early. In this context, education enables individuals to develop their knowledge and skills, while an increase in digital competencies can significantly impact career development. The development of basic digital skills can substitute for educational requirements in many occupations, helping individuals advance in their careers (One, 2017). From this perspective, whether digital competencies play a key role in helping employees attain higher-level positions and increase career satisfaction is a subject of ongoing research in the rapidly evolving business world (Hazni & Nurhaida, 2024; Itsekor & Oyewole, 2021; Khan, 2021; Li & Yu, 2022; Oubibi et al., 2022; Sahito & Vaisanen, 2017; Soeprijanto et al., 2022).

Nowadays, it is becoming increasingly important for teachers and students in learning environments where online virtual learning platforms are used. The use of virtualization in teaching, which integrates various aspects of the teaching process, can be seen as a source of motivation for the teaching profession. Teachers with digital competence serve as role models for their students and colleagues, both in online and in-class settings. In fact, today’s students, often referred to as digital natives (Prensky, 2001), have grown up with technology, making their digital skills frequently surpass those of their teachers. The teacher's professional role as a pedagogue requires the ability to address students' problems (Li & Yu, 2021). International research links teachers' professional development to increased teacher efficacy (Coldwell, 2017). A teacher's commitment to professional development positively influences their performance, student success, career advancement, and overall commitment to the profession (Tantawy, 2020). From this perspective, it is essential for teachers to feel satisfied with their jobs and their careers.

Studies on digital competencies and teacher professional development often highlight the importance of digital competence. Nowadays, it is becoming increasingly important for teachers and students in learning environments where online virtual learning platforms are used.. However, there are several challenges associated with using technology in educational environments. In their research, Hew and Brush (2007) identified six key barriers that K-12 schools often experience when embedding technology within the curriculum to support instruction. Studies on teachers' use of technology in classrooms show that teachers' digital

competence is particularly low in areas such as content creation, information literacy, and problem-solving. However, they demonstrate stronger skills in digital content communication and collaboration (Garzón-Artacho et al., 2021). Many of these studies reveal deficiencies in teacher education and ICT training (Fernández-Batanero et al., 2020). In particular, the lack of adequate ICT training negatively affects teachers' digital competences. For instance, a study conducted with Spanish secondary school teachers found that, while teachers rated themselves as having average digital teaching competence, they acknowledged several gaps that hindered the full integration of these competencies into their teaching practices (Prieto-Ballester et al., 2021). These findings suggest that teachers require more support and opportunities for development in digital education.

Although institutional support for technology integration is important, it alone does not determine the use of technology in the classroom. Even with high levels of institutional support, teachers may experience low self-efficacy in using technology (Scherer et al., 2021), suggesting that teachers' beliefs about their own capabilities can hinder technology use. While the availability of digital tools and infrastructure is essential to support technology use, it is not sufficient by itself (Bingimlas, 2009). The presence of infrastructure in educational environments only partially explains teachers' use of technology (Drossel & Eickelmann, 2017). According to Bergström (2017), the digital divide is not only caused by a lack of infrastructure, but also by individuals' ages, education levels, and personal characteristics, which are the determinants of technology use. Especially in aging societies, differences in digital skills create a significant distinction between age groups, and these individual factors are much more effective than the existence of technological infrastructure. This supports the fact that the basic elements that shape individuals' access to and use of technology are characteristics such as personal beliefs, attitudes, and competencies rather than infrastructure. On the other hand, there are some studies that reveal that teachers' digital competencies and technology use tendencies are closely related to their pedagogical beliefs, self-efficacy perceptions, and demographic variables. Tondeur et al. (2008) state that teachers who share constructivist and traditional teaching beliefs have a higher frequency of computer use and that teachers' belief profiles are a determining factor in integrating technology into classroom practices. Antonietti et al. (2022) found that teachers' beliefs about their digital competencies significantly predicted their intention to use technology through ease of use and perceived usefulness of technology in the context of the Technology Acceptance Model. In the study conducted by Hatos et al. (2022), it was found that teachers' digital competencies differed depending on age, gender, professional status, field of study, and online teaching education background; competencies in office software were exhibited more by female teachers, while multimedia and online skills were adopted more by male teachers. These findings emphasize that teachers' digital competencies have a multidimensional structure and that effective technology integration should be strengthened by professional development processes and institutional support, as well as individual factors.

In 2013, the European Commission published a report on the professional development of teachers. This report defines teaching as a career-long endeavor and emphasizes the importance of teachers developing their knowledge, skills, values, and attitudes (European Commission/EACEA/Eurydice, 2018). Like all other employees, teachers seek success by shaping their careers based on their education, experience, and talents. Career satisfaction is a key indicator that helps organizations assess employees' intention to leave their jobs (Pachulicz

et al., 2008; Weng & McElroy, 2012). Research shows that individuals who are satisfied with their careers perform better in their roles and have lower intentions to leave the profession (Nauta et al., 2009). Therefore, it is increasingly important for organizations to identify and understand the factors that influence their employees' career satisfaction, which they consider when evaluating their careers, and to develop these factors to reduce the likelihood of employees leaving their jobs (Direnzo & Greenhaus, 2011).

Many studies in the literature emphasize the importance of developing digital competencies of teachers for their career development (Caena & Redecker, 2019; König et al., 2020; Lakkala et al., 2011). Studies aimed at improving the digital competencies of teachers and the workforce reveal that individuals need to be equipped in areas such as digital skills, collaboration, security, and problem solving in order to effectively take part in the information society. While Reisoğlu and Çebi (2020) emphasize that teacher candidates' digital content production and digital collaboration skills should be comprehensively supported in the educational processes, Falloon (2020) argues that digital competencies in teacher education are fundamental for safe and ethical use in the classrooms of the future and that these skills should be consciously imparted by teacher educators. Nemeskeri et al. (2016) show that digital transformation has deepened generational differences in the labor market and that digital skills have become indispensable in business life. However, it is revealed that digital competencies often remain superficial, and education systems are not effective enough in providing these skills. A study by Almås et al. (2021) concluded that prospective teachers are not sufficiently prepared for the professional digital challenges they will face in their careers. All studies jointly emphasize that digital competencies play a critical role in individuals' career journeys and lifelong learning. Teacher education should be considered not only for the use of digital tools, but also for encouraging more thoughtful and critical perspectives on technology use.

The role of teacher competence frameworks is also pivotal in this context. The competencies outlined in these frameworks generally include skills and knowledge related to the effective integration of technology into teaching and learning processes (Lakkala et al., 2011). The European Commission (2013) states that teacher competence frameworks are valuable for defining the outcomes of teacher education, recruiting teachers, and determining professional development needs. These frameworks serve as effective tools that can guide teachers' professional development while promoting their reflection and autonomy throughout their careers. In this regard, teacher competence frameworks also play a crucial role in recognizing educators' success in their careers. Another notable finding is the challenges teachers face regarding digital competence at the start of their careers. A case study by Reisoğlu and Çebi (2020), which used DigCompEdu to examine how future teachers plan to use digital competencies in their professional careers, revealed that future teachers require training in digital skills such as information and data literacy, communication and collaboration, digital content creation, security, and problem-solving. Challenges that early-career teachers face include using digital teaching tools such as online tutoring, presenting learning content, differentiating tasks, providing feedback, and conducting online assessments. Additionally, teachers must find ways to maintain social contact with students and parents (König et al., 2020). These findings suggest that digital competence is a critical requirement in teachers' professional lives. This competence includes not only the ability to use digital tools, but also the ability to apply these tools effectively within a social and pedagogical context.

In summary, studies in the literature primarily explore the connection between digital competence and the education of prospective teachers, as well as their professional careers, from various perspectives. While digitalization has become a crucial factor in teachers' careers, the process of developing digital competencies among teachers brings about significant changes in both education systems and the labor market. Examining the relationship between teachers' perceptions of digital competence and their evaluation of the teaching profession, as viewed by in-service teachers, can help assess the impact of digitalization in current educational environments. Such research will contribute to a comprehensive understanding of how professional seniority influences perceptions of digital competence and the extent to which these perceptions shape teachers' professional identities and commitments. This approach will provide policymakers and education stakeholders with the insights needed to develop more up-to-date strategies for integrating digital skills into professional development programs, ultimately fostering a more digitally competent teacher workforce.

Digital Competence

The concept of digital competence emerged in response to the social need to define the essential competencies for a knowledge-based society (Ilomäki et al., 2016). Digital competence is a multi-layered concept, and it is challenging, if not impossible, to reach a single, comprehensive, universally applicable, and agreed-upon definition (Ala-Mutka, 2011; Ilomäki et al., 2011; Ferrari, 2012). Digital competence began to be discussed as one of the fundamental conditions for lifelong learning in Europe in the early 2000s and gained broader acceptance with the EU recommendations in 2006. Some researchers define digital competence narrowly as the ability to use specific digital tools (e.g., word processors such as MS Word) (From, 2017). However, much of the literature focuses on basic ICT skills or sub-skills (Lakkala et al., 2011). Other authors consider digital competence as a broader concept, including different areas such as ICT policy competence, ethical use, integration with teaching and didactic methods (From, 2017). These different definitions show that the concept of digital competence is multifaceted and wide-ranging.

High-level cognitive skills, such as the ability to critically search for and select information or strategically pursue specific goals, do not necessarily develop through internet experience alone (Ala-Mutka, 2011). Digital competence refers to the ability to use ICT confidently, critically, and creatively in order to pursue objectives associated with employment, learning, daily life, social participation, and civic engagement (Redecker, 2017). According to Instefjord (2015), digital competence encompasses the knowledge, skills, and dispositions required to engage with technology in a critical and reflective manner, particularly when generating new knowledge. In Norwegian education policy, digital competence has been recognized as the fifth basic skill in teacher education (From, 2017). Krumsvik (2011), who criticizes the limitation of digital competence to the mere ability to use digital tools, argues that it should be a more specific pedagogical and subject-oriented concept for teachers.

Teachers' Digital Competence

According to the Organization for Economic Co-operation and Development (OECD) (2019), general or intermediate digital skills are often central to national digital strategies or policies aimed at enhancing the digital literacy or competence of the population. While digital competences are recognized as some of the most essential skills by experts in policy, education,

and science, the rise in online learning opportunities (European Commission, 2021; JISC, 2012; P21 Learning Framework, 2019) has made teachers' digital competence an increasingly important tool for utilizing technology in schools, developing students' skills for the digital future, and promoting innovative teaching methods. Teachers' abilities and attitudes play a key role in how ICT is used in the classroom, and consequently, their students' ability to leverage new technologies to their fullest potential (OECD, 2019). In recent years, as digitalization has increasingly penetrated society and schools, several studies have emphasized the importance of teachers' digital skills (Aditya, 2021; Almazova et al., 2020; Caena & Redecker, 2019; Falloon, 2020; Garzón Artacho et al., 2020; Garzón Artacho et al., 2021; Hatos et al., 2021). Consequently, digital competence includes not only the ability to use digital tools, but also the ability to use digital technologies pedagogically and contribute to students' digital education. Generally, teachers' digital competence can be expressed as the set of knowledge, skills, and attitudes required to operate effectively in a digital teaching environment (Zhao et al., 2021). The Technological, Pedagogical, and Content Knowledge (TPACK) framework developed by Mishra and Koehler (2006) is a prominent measure used to assess teachers' knowledge of how to integrate technology into their teaching. It defines the knowledge that teachers possess as effective technology integrators. Another framework, the ISTE Standards for Teachers (ISTE-ST), created by the International Association for Technology in Education (ISTE), specifies the technology-facilitated skills teachers need. Both frameworks serve as guides for teacher educators in developing curricula that help prospective teachers acquire the content, pedagogies, and technology skills essential for their careers.

European Framework for the Digital Competencies of Educators (DigCompEdu)

The DigComp 2.1 Framework, published by the Joint Research Centre (JRC), the evidence-based science and knowledge service of the European Commission, includes five dimensions (Carretero et al., 2017). The DigCompEdu Framework proposes 22 core competencies designed to capture and define digital competencies specific to educators, organized into six domains. It outlines six stages of development, illustrating how an educator's digital competence typically evolves. This framework helps educators identify their current stage and take specific steps to advance their competence. Each of the 22 core competencies is associated with a set of typical competence-defining activities, offering a more detailed understanding of how educators can develop their digital competencies and what it entails for educators to possess digital competence. In the first two stages, educators acquire new knowledge and develop foundational digital practices as newcomers (A1) and explorers (A2). In the subsequent stages, they apply, expand, and refine their digital practices as integrators (B1) and experts (B2). In the final two stages, they transfer their knowledge, critically evaluate existing practices, and innovate new ones as leaders (C1) and pioneers (C2) (Redecker, 2017).

The DigCompEdu framework provides a role descriptor that reflects the typical focus of digital technology use at each stage of competence in educators' digital development. According to this framework, educators at the A1 (Beginner) level recognize the potential of digital technologies to enhance pedagogical and professional practice. However, they primarily use these technologies for course preparation, management, or organizational communication. Educators at the A2 (Explorer) level also acknowledge the possibilities offered by digital technologies and a willingness to investigate how they can improve teaching and professional work. However, their use of digital technologies may be more limited and

inconsistent, as they may not yet adopt a comprehensive or structured approach. Educators at the B1 (Integrator) level integrate digital technologies into most aspects of their practice, experimenting with various tools and approaches across different contexts and for multiple purposes. They use these technologies creatively to enhance their professional involvement and actively seek opportunities to broaden their expertise. However, they are still working to identify the best tools for specific situations and to effectively incorporate digital technologies into their pedagogical strategies. Educators at the B2 (Expert) level confidently, creatively, and critically employ a wide array of digital technologies to strengthen and enrich their professional practice. They make deliberate choices about which technologies to use for specific circumstances and seek to explore the advantages and limitations of different digital strategies. They stay curious and open to new ideas, knowing there is always more to learn. Educators at the C1 (Leader) level demonstrate a coherent and well-rounded strategy for integrating digital technologies to strengthen both pedagogical and professional practice. At the C2 (Pioneer) level, educators challenge the effectiveness of current digital and pedagogical approaches, including those under their own leadership. Recognizing the constraints of existing practices, they are driven to continue innovating. As pioneers, they explore cutting-edge and sophisticated digital technologies and/or design novel pedagogical frameworks (Redecker, 2017).

Concept of Career

Although the concept of career began to be more widely studied in the business world in the 1970s, its origins can be traced back to the 16th century, with the development of the modern concept of public service. During this period, the idea of a career was particularly associated with civil service roles. The scientific exploration of the concept began with Anne Roe's 1956 book The Psychology of Occupations. This was followed by influential studies, such as Donald E. Supper's Career Psychology (1950) and Triedeman and O'Hara's Choice and Adaptation in Career Development (1963), which expanded the discussion around career development. Additionally, Borows' Industrial Sociology (1964) and John Holland's Theory of Occupational Choice (1966) further enriched the field's literature.

Working life is experiencing rapid change (Blau, 2001), which has amplified the significance of the concept of career, ensuring its relevance in contemporary society. As a result, career development has gained growing significance in individuals' professional lives. According to Griffin (1993), the key distinction between work and career lies in an individual's psychological commitment. For instance, individuals may fail to fully recognize the true importance of their work if they view it solely in terms of fixed hours or financial compensation. However, when individuals consider the quality of their work, as well as aspects like progress and self-realization, in addition to financial income, it indicates they perceive their work as a career (Drucker, 1994). In this context, Griffin (1993) argues that money is just one of many factors influencing the individual. While individuals typically begin their careers to meet basic needs such as salary and promotion, over time, they may strive to fulfill higher-level needs, such as career advancement, which go beyond these basic requirements. In other words, when individuals perceive their work as a career, they may become more engaged and invested in it. According to Cascio (2015), a career subjectively represents the transformation of an individual's values, attitudes, and motivations as they mature, while objectively, it refers to the sequence of positions held throughout their professional life. In general, a career is a process

related to professional practice and engagements shaped by both individual and organizational goals, with aspects that individuals can control and monitor throughout their lives (Orpen, 1994).

Career Satisfaction

Career satisfaction is defined as an individual's feelings or reactions to events related to career and work (Gattiker & Larwood, 1989). In their study, Williamson, Pemberton, and Lounsbury (2005) articulated the distinction between career satisfaction and job satisfaction.. They defined the level of happiness that individuals feel about their careers, which includes all the jobs they have worked in throughout their lives, as "career satisfaction", and the indicator of feelings related to a single job or position as "job satisfaction".

Career satisfaction was assessed by Greenhaus et al. (1990) based on the level of goal achievement in five key areas: occupational achievements, general occupational goals, income-related goals, career advancement, and the acquisition of new skills. An individual's success in achieving these goals plays a crucial role in their career satisfaction (Yüksel, 2005). Accurately identifying the factors that contribute to career satisfaction is essential not only for attracting qualified employees to an organization but also for ensuring that employees remain motivated and highly committed (Judge et al., 1995).

Less experienced teachers tend to have a limited perspective on teaching, and their perceptions of digital competence can vary depending on gender and university background (Zhao et al., 2021). Similarly, Hatos et al. (2022) found that digital skills are perceived differently by gender, according to the perceptions of Romanian teachers with an associate degree. A study by Ng et al. (2005) found no relationship between gender and career satisfaction. In contrast, Greenhaus et al. (1990) in the USA, Seibert and Kraimer (2001) (also in the USA), Tak and Lim (2008) in Korea, and Hirschi et al. (2016) in Germany found a relationship between gender and career outcomes among all genders. On the other hand, it has been reported that demographic variables can predict career satisfaction to some extent, but internal, psychosocial variables, as well as work quantity and interpersonal dynamics, can influence these outcomes (Richards et al., 2017).

When we examine the difference between teachers' career development and professional development, research shows that development has positive effects on career advancement and professional commitment (Coldwell, 2017; Tantawy, 2020). A performance study investigating the differences in professional burnout levels and job satisfaction among teachers found a significant impact on their self-efficacy (Bartosiewicz et al., 2022). It is also evident that the distribution of financial resources within the school environment, as well as the use of digital literacy and ICT, plays an important role in shaping career outcomes (Li & Yu, 2022; Sahito & Vaisanen, 2017). Previous studies have shown that teacher collaboration and professional communities have positive effects on job satisfaction (Stearns et al., 2015). The literature indicates a need to examine both individual and contextual variables, such as the development of career relationships, job satisfaction, and burnout status. Peluchette (1991) observed that individual, family, and educational variables are key factors in the career success of teaching professionals. Additionally, teachers' positive attitudes toward technology can contribute to beneficial economic developments (Morris, 2021). One definition of career satisfaction for teachers refers to how well the work environment meets their needs, while

another definition encompasses both psychological and physical satisfaction with the work environment and personal performance (Li and Yu, 2022). It is possible that teachers' career satisfaction, as related to their profession rather than job satisfaction, positively influences their overall life satisfaction. Understanding both the digital competencies and career development of teachers is crucial for fostering social respect for individuals in the teaching profession.

Enhancing the professional well-being of teachers is undeniably critical in education and training environments. From this perspective, understanding teachers' technological competencies and fostering their commitment to the profession can help alleviate career concerns and dissatisfaction. In their research on 'Educational Leadership,' Hoyle (2001) found that improving teachers' commitment to their work, advancing their education levels, and achieving job satisfaction can be supported by elevating their professional status and prestige. This study, which focuses on teachers' career satisfaction, differentiates itself from previous research on job satisfaction (Bartosiewicz et al., 2022; Demirtas, 2010; Ignat & Clipa, 2012; Stearns et al., 2015; Toropova et al., 2020). This research aims to explore the relationship between in-service teachers' self-perception of their digital teaching competence and their career satisfaction. To this end, the study sought answers to the following questions:

(1) What are the levels of digital competence and career satisfaction among teachers?

(2) Do teachers' perceptions of digital competence differ according to gender, length of teaching experience, position, and education level?

(3) Do teachers' perceptions of career satisfaction vary according to gender, length of teaching experience, position, and education level?

(4) Is there a significant relationship between teachers' digital competence perception levels and career satisfaction?

Method

Research Design and Study Group

The research is a quantitative study based on the relational screening model. This model aims to determine whether a relationship exists between two or more variables, and if so, to assess the direction and strength of this relationship (Büyüköztürk et al., 2008). The research data were collected simultaneously using a personal information form, a digital competence scale for educators, and a career satisfaction scale. The study was conducted in the fall semester of the 2022-2023 academic year. Data was collected electronically via Google Forms. A total of 208 teachers from different schools and grades of public schools affiliated with the Ministry of National Education in Ankara, Türkiye, participated in the study voluntarily. The study group was selected using a convenience sampling method, a type of non-random sampling that allows for the inclusion of participants who are readily accessible and willing to participate (Büyüköztürk et al., 2008). While this method helps minimize loss of time, effort, and resources, it also limits the generalizability of the findings.

Data Collection Instruments

Personal Information Form

This form was created by the researchers in line with the research objectives in order to determine the gender, year of teaching experience, position, and education level of the teachers in their respective schools. Table 1 presents the descriptive statistics of the study group for demographic variables. Table 1 shows that 97 (46.6%) of the study participants are women, while 111 (53.4%) are men. Regarding their positions, 48 (23.1%) of the teachers are specialist teachers. In terms of seniority, 68 teachers (32.7%) have 10-15 years of teaching experience, 39 (18.8%) have 16-20 years, 49 (23.6%) have 21-25 years, and 52 (25%) have 26 or more years of service. While 137 (65.9%) of the participants had a bachelor's degree, 71 (34.1%) had a master's degree or doctorate.

Table 1

Descriptive Statistics for Teacher Demographics

Characteristic	*Categories*	*N=208*	*%*
Gender	Female	97	46.6
	Male	111	53.4
Length of Teaching Experience	10-15 years	68	32.7
	16-20 years	39	18.8
	21-25 years	49	23.6
	Over 26 years	52	25.0
Position	Teacher	160	76.9
	Specialist Teacher	48	23.1
Education Level	Bachelor's degree	137	65.9
	Postgraduate	71	34.1

Digital Competence Scale for Educators

The Digital Competence Scale for Educators (DCSE), which aims to assess educators' digital competencies, was developed by Redecker (2017). The study group's responses are measured on a scale ranging from 0 to 4. The scale was adapted for Türkiye by Toker et al. (2021). The scale consists of 22 items and six factors, with no negative items. The six factors are: professional engagement (four items), digital resources (three items), teaching and learning (four items), evaluation (three items), empowering students (three items), and facilitating students' digital competencies (five items).

The reliability coefficient of the scale for the 22 items was calculated as 92. Item analysis results revealed that item-total score correlations r (j(x)) is .248 for item 4 and ranged between .407 and .709 for the other items. The Cronbach's alpha values for the scale factors were as follows: .60 for professional engagement, .62 for digital resources, .74 for teaching and learning, .68 for assessment, .73 for empowering students, and .87 for facilitating students' digital competencies. According to the literature, a Cronbach's alpha value of .70 or above is generally viewed as an acceptable level of internal consistency reliability (Nunnally & Bernstein, 1994). Based on these criteria, while most sub-dimensions of the scale demonstrate acceptable to

high reliability, the factors with alpha values slightly below .70 can still be considered moderately reliable within the context of this study. The competence levels, based on the scores that can be obtained from the scale, are categorized as follows (from lowest to highest score): Newcomer (A1: 0-19), Explorer (A2: 20-33), Integrator (B1: 34-49), Expert (B2: 50-65), Leader (C1: 66-80), and Pioneer (C2: 81 and above).

Career Satisfaction Scale

In order to measure career satisfaction, the five-item career satisfaction scale developed by Greenhaus et al. (1990) and used by Hofmans et al. (2008) was used. Responses were taken on a 5-point Likert scale (1=Strongly disagree, 5=Strongly agree). The Turkish adaptation and the validity-reliability study of the Career Satisfaction Scale were conducted by Avcı and Turunç (2012). The factor analysis performed by Avcı and Turunç (2012) revealed that the data fit the single-factor structure of the scale, with factor loadings ranging between .70 and .90. Additionally, the reliability analysis conducted by the same researchers indicated that the Cronbach's alpha reliability coefficient of the scale was calculated as .91. As a result of the internal consistency analysis of the five-item career satisfaction scale, Cronbach's Alpha coefficient was found to be 0.923. This value indicates that the scale has a very high level of reliability.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). There were no missing values in the collected data, and the distribution was found to be normal, as the skewness and kurtosis values were within the predicted range of +2. Furthermore, the z-statistic, obtained by dividing the skewness coefficient by its standard error, was less than 1.96 for $\alpha = .05$ and 2.58 for $\alpha = .001$, indicating that the distribution does not significantly deviate from normal (Büyüköztürk, 2013). Histogram plots were also examined to visually assess the distribution. Furthermore, normality was checked separately for each subgroup (e.g., gender, educational level, seniority), and all were found to meet the assumptions of normal distribution. Based on these findings, the variables were deemed suitable for parametric statistical analyses. To analyze the data obtained from the scales, independent samples t-tests were performed for the variables of gender, position, and education level, while a one-way ANOVA was applied to examine the effect of length of teaching experience. Levene's test was performed to evaluate the homogeneity of variances, and the results indicated that the differences in variances between groups were not significant ($p > .05$). For post-hoc comparisons between groups, Bonferroni test was utilized. Additionally, a correlation analysis was performed to investigate the relationship between teachers' digital competence perception levels and career satisfaction, which addressed the fourth research question.

Results

Teachers' perception levels of digital competence and career satisfaction

The first research question is: 'What are the levels of digital competence and career satisfaction among teachers?' The Digital Competence in Education Scale consists of 22 items and six factors. Based on the results of the scale application, participants are evaluated across six categories: Newcomer A1, Explorer A2, Integrator B1, Expert B2, Leader C1, and Pioneer C2.

The distribution of the study group according to their digital competence levels is presented in Table 2.

Table 2

Digital Competence Level Distribution of Teachers

Levels	*n*	*%*
Newcomer A1 (19 points and less)	6	2.9%
Explorer A2 (20 -33 points)	47	22.6%
Integrator B1 (34-49 points)	75	36.1%
Expert B2 (50 -65 points)	55	26.4%
Leader C1 (66 – 80 points)	25	12.0%
Pioneer C2 (81 points and higher)	0	0%
Total	208	100%

It can be seen from Table 2 that the highest number of teachers is in the *Integrator (B1)* level, with a rate of 36.1%. Notably, there are no teachers in the *Pioneer (C2)* category among the participants. The results of the descriptive analysis regarding teachers' digital competence scores and levels are given in Table 3.

Table 3

Statistics on Digital Competence Score and Level

	N	*Mode*	*Median*	*Mean ($\bar{X}$)*	*Minimum*	*Maximum*
Digital Competence Scores	208	41	41	44.3	13	80
Digital Competence Level	208	3	3	3.22	1	5

According to descriptive statistics, the digital proficiency scores of the participating teachers (N = 208) ranged from 13 to 80, with a mean of 44.3. According to the scale's scoring system, this average ranks teachers in the Level 3 (Integrator; between 34 and 49) category in terms of digital proficiency. Based on categorical digital proficiency levels, the mean score was calculated as 3.22 out of 5. These findings indicate that the majority of participants were at the "Integrator" level.

According to the descriptive analysis results, the average career satisfaction level of teachers is 3.04, indicating a medium level of satisfaction. The group with the highest average career satisfaction score is teachers with 10-15 years of experience. The status and seniority of individuals in their workplace certainly influence their motivation and satisfaction. When career is defined as the satisfaction an individual feels about their current position or career step, it reflects the outcome of evaluations made by employees regarding the extent to which their expectations are met in the organization they work for (Heslin, 2005, p. 116). The underlying reasons for the teachers' satisfaction not increasing despite their seniority may be attributed to managerial, organizational, or financial factors.

Descriptive analysis of digital competence by gender, length of teaching experience, position, and education level

The second question of the research is "Do teachers' perceptions of digital competence differ according to gender, length of teaching experience, position, and education level?". Before the analysis, descriptive statistics for the Digital Competence Scale for Educators were calculated. Accordingly, mode, median, mean ($\bar{X}$), Standard Deviation (SD), skewness, and kurtosis values are presented in Table 4.

Table 4

Statistics According to Areas of the Digital Competence Scale

Areas	*N*	*Mode*	*Median*	*Mean ($\bar{X}$)*	*sd*	*Skewness*	*Kurtosis*
Professional engagement	208	2.25	2.00	1.94	.74	.127	-.737
Digital Resources	208	2.67	2.33	2.20	.82	-.135	-.621
Teaching and Learning	208	2.00	2.00	2.02	.91	.093	-.727
Assessment	208	1.33	2.33	2.15	.91	.189	-1.039
Empowering Students	208	1.67	2.00	2.00	.86	.056	-.676
Facilitating Students' Digital Competencies	208	1.20	1.20	1.86	.84	.103	-.266
Digital Competence Scale Total Score	208	41	41	44.30	14,97	.209	-.806

When the descriptive statistics for the data set presented in Table 4 are examined, it is revealed that the digital proficiency levels of the participating teachers are generally at a moderate level. The highest mean score across competence areas was obtained for the "Digital Resources" dimension with a score of 2.20, while the lowest was recorded for the "Facilitating Students' Digital Competencies" dimension with a score of 1.86. Skewness and kurtosis values for all variables were within ±1, indicating that the distributions were close to a normal distribution. Low standard deviations indicate a homogeneous structure of the responses and that there was no significant variance among participants. The mean total digital competence score ($\bar{X}$ = 44.30) was moderate compared to the theoretical maximum, indicating a need for digital competence development. According to the Levene tests performed to check the equality of variances before the analysis, homogeneity of variances is ensured for gender (p = .181), position (p = .21), and education level (p = .92).

The independent samples t-test results shown in Table 5 indicated that there was no significant difference between the mean total digital competence scores of gender groups (p = .777,>.05). Although there was a small difference of approximately 0.59 points between the digital competence scores of females and males, this difference was not statistically meaningful. Because the mean difference was small and the p-value was very high, Cohen's d was also very small. Cohen's d was 0.04, which is a negligible effect size. Although there was a difference of approximately 1.91 points between the digital competence levels of specialist teachers and teachers, this difference was not statistically significant according to the independent samples t-test results (p = .44,>.05). An independent samples t-test performed between the mean total digital competence scores by educational status showed a significant

difference (p = .003,<.05). The digital competence scores of postgraduate graduates ($\bar{X}$ = 48.58) are significantly higher than the scores of bachelor's degree ($\bar{X}$ = 42.09). Furthermore, Cohen's d value, calculated to assess the effect size for the difference between teachers' education levels, was found to be -0.44, indicating a moderate effect size. This suggests that there is a moderate difference in digital competence scores between teachers with bachelor's degree and postgraduate education, with postgraduate educators demonstrating higher levels of digital competence.

Table 5

Group Differences in Digital Competence by Gender, Position and Education Level

Variables		*N*	*Mean ($\bar{X}$)*	*sd*	*t(206))*	*p*	*Cohen d*
Gender	Female	97	44.62	15.71	0.284	.777	0.04
	Male	111	44.03	14.37			
Position	Teacher	160	43.86	15.40	-0.774	.440	-0.13
	Specialist Teacher	48	45.77	13.52			
Education Level	Bachelor's degree	137	42.09	14.92	-3.021	.003*	-0.44
	Postgraduate	71	48.58	14.23			

Table 6

Group Differences in Digital Competence by Teaching Experience

Teaching Experience	*N*	*Mean ($\bar{X}$)*	*sd*	*df*	*F(204)*	*p*	*(Partial Squared)η^2*	*Eta*
10-15 years	68	46.79	15.70	3	1.31	.274	0.019	
16-20 years	39	41.41	14.53					
21-25 years	49	44.73	14.47					
Over 26 years	52	42.81	14.66					
Total	208	44.30	14.97					

The one-way analysis of variance (ANOVA) presented in Table 6 showed that length of teaching experience had no statistically significant effect on the digital competence total scores (p = .274> .05). According to this result, digital competence scores do not differ significantly among individuals in different length of teaching experience groups. The Levene test results, applied before the analysis, indicated that the assumption of homogeneity of variance was met (p = .550). Therefore, the assumptions of the one-way ANOVA analysis are valid. The effect size value (η^2 = .019) is quite low, indicating that length of teaching experience only explains approximately 1.9% of the variance in total digital competence scores. These findings suggest that teachers' digital competence levels do not change significantly according to length of teaching experience. No systematic difference was found regarding the increase or decrease in digital competencies with increasing length of teaching experience. The relatively low effect size suggests that length of teaching experience is not a determining factor in digital competence. This could indicate that teachers may have similar digital skill levels regardless of

their length of teaching experience, or that these skills are influenced more by other factors such as individual attention, training, or access to technology.

Career satisfaction by gender, length of teaching experience, position, and education

The third question of the research is "Do teachers' perceptions of career satisfaction vary according to gender, length of teaching experience, position, and education level?" Before the analysis, descriptive statistics for the scale were calculated, and accordingly, mode, median, mean ($\bar{X}$), Standard Deviation (SD), skewness and kurtosis values are presented in Table 7. These descriptive statistics help in understanding the central tendency, variability, and the shape of the distribution of the data for the scale items. It provides a clear view of the data characteristics before conducting further analysis.

Table 7

Findings on Career Satisfaction Scale

	N	*Mode*	*Median*	*Mean ($\bar{X}$)*	*sd*	*Skewness*	*Kurtosis*
Average Career Satisfaction	208	3	3	3.04	1.02	-.148	-.501

When Table 7 is examined, it is evident that the skewness and kurtosis values of the scores obtained from the career satisfaction scale are within the range of ± 1.96. These results show that the data are normally distributed. The average career satisfaction score is ($\bar{X}$ = 3.04), which suggests that teachers' career satisfaction perceptions are at a medium level.

Table 8

Group Differences in Career Satisfaction by Gender, Position and Education Level

Variables		*N*	*Mean ($\bar{X}$)*	*sd*	*t(206))*	*p*	*Cohen d*
Gender	Female	97	2.99	0.98	-0.60	.552	0.08
	Male	111	3.08	1.06			
Position	Teacher	160	3.04	1.01	-0.12	.908	-0.02
	Specialist Teacher	48	3.06	1.08			
Education Level	Bachelor's degree	137	3.01	1.05	-0.73	.466	-0.11
	Postgraduate	71	3.12	0.98			

The results of the independent samples t-test, presented in Table 8, showed that there was no statistically significant difference between the career score means of male and female participants (p = 0.552 >.05). The means of male and female participants were quite close, and the difference was not significant. The Levene test showed that the variances were homogeneous (p = 0.571). An independent samples t-test revealed no significant difference between the career score means of participants with teacher and specialist teacher positions (p = .908 >.05). Levene's test revealed that the variances were homogeneous (p = .664). Effect size calculations also support this result (Cohen's d = -0.02, 95% CI [-0.34, 0.30]), indicating that the position variable had no significant effect on career score. An independent samples t-test revealed no significant difference between the career score means of participants with

bachelor's degree and postgraduate degrees (p = .466 >.05). Levene's test revealed that the variances were homogeneous (p = .492). Effect size calculations also support this result (Cohen's d = -0.11, 95% CI [-0.39, 0.18]), indicating that educational status has no statistically or practically significant effect on career score.

Table 9

Group Differences in Career Satisfaction by Teaching Experience

Teaching Experience	*N*	*Mean (X̄)*	*sd*	*df*	*F(204)*	*p*	*(Partial Eta Squared) η²*
10-15 years	68	3.22	0.95	3	2.881	.037*	0.04
16-20 years	39	3.19	0.90				
21-25 years	49	3.02	0.99				
Over 26 years	52	2.71	1.17				
Total	208	3.04	1.02				

According to the Levene variance homogeneity test performed before the analysis, the variances were found to be homogeneous (p = .121 > .05). Therefore, the Bonferroni post-hoc test was applied after the one-way ANOVA analysis. One-way ANOVA analysis presented in Table 9 showed that there was a statistically significant difference in the career score averages according to different lengths of teaching experience (p = .037<.05). This result reveals that length of teaching experience explains approximately 4.1% of the variance in career scores. The obtained eta squared value (η^2 = .041) indicates a small-to-medium effect size (Cohen, 1988). As a result of multiple comparisons with Bonferroni correction, it was observed that the significant difference was especially between participants with 10–15 length of teaching experience and those with 26 years or more of seniority (mean difference = 0.512, p = .039). Differences between other length of teaching experience groups were not found to be statistically significant (p > .05). The calculated effect size for the difference between these two groups was Cohen's d = 0.49, corresponding to a medium effect. The results indicate that career score averages differed by seniority, with a particularly significant difference between the lowest (10–15 years) and highest (26 years and above) seniority groups. However, the moderate effect size also suggests that the effect of length of teaching experience on career scores is limited.

Relationship between digital competence and career satisfaction

The fourth question of the research is "Is there a significant relationship between teachers' digital competence, perception levels, and career satisfaction?" The research question regarding the relationship between teachers' digital competence perception levels and career satisfaction was examined through correlation analysis. According to the results presented in Table 10, a low-level positive relationship was found between teachers' digital competence perception levels and their career satisfaction. This suggests that as teachers' digital competence perception levels increase, their career satisfaction also tends to improve, though the relationship is relatively weak.

Table 10

Relations Between Career Satisfaction and Digital Competence Level

Variables		*Career Average Level*	*Digital Competence Level*
Career Satisfaction Level	Pearson Correlation	1	.171
	Sig. (2-tailed)		.014*
Digital Competence Level	Pearson Correlation	.171	1
	Sig. (2-tailed)	.014*	

** correlation is significant at the 0.05 level.*

Online technologies are indeed more flexible and useful compared to traditional learning models and contribute to the effective transmission of knowledge and skills (Li & Yu, 2022). When Table 10 is examined, it is found that there is a low-level positive relationship between educators' self-perception of competence in using online technologies in the schools where the research was conducted and their satisfaction with their professional careers. This relationship suggests that while teachers' digital competencies may be linked to their career satisfaction, the relatively weak correlation could point to underlying issues. It may imply that digitalization is not entirely indifferent to teachers, but rather, the low correlation might reflect inadequacies or gaps in the effective use of technology. Teachers' perceived competence in using digital tools may have a significant negative impact on their overall career satisfaction due to a number of factors.

Discussion

This study examined teachers' digital competence levels and career satisfaction levels. According to the average scores obtained from the study, teachers' digital competence ($\bar{X}$ = 3.22) and career satisfaction ($\bar{X}$ = 3.04) are both at moderate levels. When examining the distribution of digital competence levels among teachers included in the study, it is evident that the highest proportion of teachers (36.1%) falls into the "Integrator B1" level. Teachers in this group are proficient at integrating digital technologies into most of their practices, experimenting with them in various contexts and for different purposes. Additionally, 26.4% of the teachers in the study are at the "Expert B2" level, and 22.6% are at the "Explorer A2" level. These findings suggest that a significant portion of the teachers are competent in using digital technologies, although there is still a notable proportion of teachers at lower levels of digital competence. Among these groups, which are in close proportions, teachers at the Explorer A2 level need encouragement, insight, and inspiration (Redecker, 2017). For instance, teachers in this group can be supported in using technology through peer collaboration and mentoring. Teachers' digital competencies are influenced not only by the physical infrastructure of the school and the use of ICT tools in lessons but also by their relationships with colleagues (Dai, 2023). Indeed, studies in the literature have shown that teachers' satisfaction is affected by working conditions, such as resources and a supportive environment (Li & Yu, 2022). Teachers at the Expert B2 level in this study could play a crucial role in driving innovative practices in the school. These teachers possess a higher level of digital competence and can help integrate technology in teaching and learning. Interestingly, no teachers in the study were classified at

the Pioneer C2 level. However, this might change if a different sample is used. Educators at the Pioneer C2 level are considered unique and rare (Redecker, 2017), and in addition to having the ability to lead innovation, they can also serve as role models for teachers at the beginning of their careers.

Apart from these findings, the teacher group with the lowest percentage in the study was the Newcomer A1 group, with just 2.9%. Teachers in this group need guidance and encouragement to apply their existing digital competencies effectively in the pedagogical field. This result is promising in that it suggests the digital skills of the teachers in the study are not at the lowest level, and, except for a small percentage, teachers are not falling behind in the digital age. Teachers' ability to use their digital skills effectively in the classroom to support career development can positively influence job satisfaction. Previous research has shown that teachers who are satisfied with their jobs tend to perform better (Iqbal et al., 2016). This highlights the importance of providing ongoing support and professional development opportunities for teachers, particularly those in the earlier stages of their digital competence journey, to enhance their satisfaction and performance in the profession.

When the average scores of the digital competence scale obtained in the study were examined, it was observed that the highest average was in the Digital Resources field. Teachers at the Integrator B1 level in this field possess the competencies to use evaluation strategies, analyze student data, and provide feedback and planning accordingly. These competencies reflect the use of digital technologies for in-class evaluation, such as digital exams, e-portfolios, and educational games. The ability to utilize these tools depends not only on the physical infrastructure of the school but also on the availability of personal computers and teachers' proficiency with technology to create and implement such tools. According to previous studies, digital competence encompasses several aspects: technical skills, the ability to work and learn using digital technologies effectively in daily life, the capacity to critically evaluate digital tools, the ability to teach using ICT tools, as well as demographic factors and the motivation to engage in and commit to a digital culture (Garzón-Artacho, 2021; Hatos et al., 2022; Ilomäki, 2016; Ilomäki et al., 2016; Prieto-Ballester, 2021; Zhao et al., 2021). These findings highlight the multifaceted nature of digital competence, emphasizing the need for a balanced approach to developing teachers' digital skills across various areas.

Teacher satisfaction is closely linked to the well-being of teachers, the harmony within the school environment, and the advancement of the teaching profession (Toropova et al., 2021). Monetary rewards have often been considered an important motivator. However, Drage (2010) emphasized that teachers' motivation to participate in continuous learning and development stems from intrinsic factors such as personal growth, job satisfaction, and the desire to improve teaching practices, rather than solely from financial incentives. This suggests that while financial incentives remain a significant factor, creating an environment that fosters intrinsic motivation through professional development opportunities, peer support, and recognition of teachers' efforts is essential for sustaining career satisfaction and improving teachers' digital competence.

The lowest average in the digital competence scale was found in the area of Facilitating Students' Digital Competence. Teachers in this area are expected to guide students in managing their digital identities, protecting their privacy, and using digital tools responsibly. Furthermore, these competencies also include the ability to assist students with diverse needs,

including those with physical or mental limitations or learning disabilities, in using and developing their digital skills.

Providing appropriate resources and support to teachers who work with students with special needs to help them interact with technology is crucial. Training teachers in digital pedagogy, as suggested by Skantz-Åberg et al. (2022), can improve their attitudes and confidence in applying technological tools in inclusive educational settings. Considering inclusive education as a necessity in today's teaching environment, it is essential to support the training and motivation of teachers to enhance their digital competencies in this area. By equipping teachers with the skills and knowledge to facilitate students' digital competence, we can create more equitable educational opportunities for all students, including those with special needs. This support can lead to positive outcomes both for teachers' career satisfaction and for the students' digital literacy development.

According to the t-test and ANOVA results, no significant differences were found in teachers' digital proficiency scores based on gender, position, and length of teaching experience. However, a significant difference was observed in teachers' digital proficiency scores based on their level of education. The results revealed that teachers with bachelor's degrees had lower digital proficiency scores than those with master's degrees ($p < .05$). This finding suggests that higher academic proficiency contributes positively to teachers' perceptions of digital proficiency. The higher digital proficiency scores of teachers with master's degrees may be attributable to the fact that post-graduate education generally involves more intensive use of technology. Academic work requires at least minimal use of computers and technology, and this is likely enhanced by digital proficiency. Additionally, though there were few teachers with doctoral degrees in the study, the data showed that teachers' digital competence increases with the level of education they have received. This trend aligns with research conducted on teacher candidates in Spain, where students pursuing a master's degree had higher skill acquisition values and more advanced digital competence levels than undergraduate students (García-Vandewalle García et al., 2023). This suggests that the higher the level of academic education a teacher receives, the more positive the self-evaluation of their digital competence becomes. From this perspective, teachers' academic qualifications directly contribute to their ability to use digital technologies in the classroom (Gomez Garcia, 2015). However, it is important to note that education alone is not sufficient. Teachers must also develop technological, pedagogical, and content knowledge, as the nature of the information being taught requires these skills (Mishra & Koehler, 2006). In conclusion, for teachers to improve and remain current in their profession, it is essential that they continue their education throughout their careers. Ongoing professional development is vital for teachers to acquire the necessary knowledge, skills, and attitudes to fulfill their pedagogical roles effectively in the classroom (Redecker, 2017).

The teachers in this study had an average career satisfaction score of 3.04, indicating a moderate level of satisfaction. No significant differences were found in career satisfaction based on gender, position, or level of education. When the data were examined by seniority, the group with 10-15 years of experience had the highest career satisfaction score ($\bar{X} = 3.22$), while the group with 26 or more years of experience had the lowest score ($\bar{X} = 2.71$). While the findings suggest that career satisfaction decreases with seniority, this phenomenon can be interpreted in terms of burnout theory, which posits that prolonged occupational stress

without adequate support leads to emotional exhaustion and decreased job satisfaction (Maslach & Leiter, 2016). Furthermore, Herzberg's two-factor theory suggests that extrinsic factors, such as salary and recognition, which are often perceived as inadequate by senior teachers, may contribute to dissatisfaction even when intrinsic motivations remain constant (Herzberg, 1966). However, contrasting studies report stable or even increasing satisfaction among senior teachers (Ingersoll, 2001), suggesting that individual coping mechanisms and institutional support play moderating roles. The observed decline, therefore, highlights the need for targeted interventions to address the changing professional needs of senior teachers. As highlighted in Akiri and Ugborugbo's (2009) study, sources of dissatisfaction include low salary, poor public image, and lack of recognition for highly qualified and experienced teachers. Over time, senior teachers may feel underappreciated or even experience burnout, which may lead to a decrease in their career satisfaction. As seniority increases, teachers may feel that their contributions are not sufficiently rewarded, which may negatively impact their job satisfaction. This is consistent with research on teacher burnout, which suggests that a significant proportion of teachers report high levels of stress, and that in one Australian study, over 50% of teachers are considering leaving the profession due to burnout and dissatisfaction (Carroll et al., 2022). Teachers, especially those with many years of experience, may experience increased anxiety, dissatisfaction, and burnout, which can impact their teaching performance and mental well-being. To address this issue, it is essential that educators feel supported in their professional roles. In particular, the integration of technology into the classroom should be addressed in a way that does not overwhelm teachers. Ensuring that teachers have the resources, support, and recognition they need to effectively integrate technology and avoid burnout is crucial to maintaining their career satisfaction and mental health (Morris, 2021).

According to the findings in the study, there is a low-level positive relationship between teachers' digital competence levels and their career satisfaction levels. This suggests that teachers' perceptions of their digital competence are linked to their overall satisfaction with their careers, although there may be other factors influencing this relationship. Career satisfaction is a complex concept influenced by various factors, including the structure of the school, relationships with school administrators, the activities carried out at the school, and teachers' satisfaction with these activities (Chapman & Lowther, 1982). The adequacy of career development opportunities also plays a crucial role in career satisfaction. Human resources experts emphasize that one of the primary reasons for the loss of qualified employees in organizations is the lack of career development opportunities (Derven, 2015). Teacher satisfaction is particularly important because teachers directly impact students' professional lives. While job satisfaction directly impacts their personal well-being, it also has indirect impacts on various aspects of education. Given the central role of teacher education in producing a highly educated workforce, ensuring that teachers are satisfied with their careers is crucial for the development of a strong, effective educational system (Fwu & Wang, 2002). By providing teachers with opportunities for professional growth, recognition, and support, schools can help enhance their career satisfaction, which, in turn, may positively influence their digital competence and teaching effectiveness.

Conclusion and Recommendations

In this study, the relationship between teachers' perceptions of their digital competence levels and their career satisfaction was examined by taking into account variables such as gender, seniority, position, and educational background. The results indicate a positive relationship between teachers' perceived competence in using educational technologies and their reported levels of career satisfaction. However, the relatively weak strength of this relationship suggests that individual, organizational, and managerial factors may affect teachers' perceptions of their career satisfaction. Indeed, the concept of school leadership creates a significant impact in developing digital competence among teachers by creating a clear vision for technology integration and facilitating access to the necessary resources (Leithwood et al., 2020). Prioritizing professional learning communities and providing continuous technical and pedagogical support by leaders contributes to the creation of environments conducive to digital innovation (Hallinger & Heck, 2010). In addition, the provision of structured frameworks by policymakers that finance digital skills training in educational settings, together with incentives for participation, can accelerate skills development efforts across educational institutions (OECD, 2021). In this way, it may be possible to address technical infrastructure inequalities to ensure equitable access to digital tools and thereby reduce the digital divide disadvantage. While the study focuses on the Turkish educational context, the findings are consistent with global trends indicating a moderate level of digital competence among teachers (Eurydice, 2019). For example, studies in Finland and Estonia show similar patterns of digital skills gaps that require targeted professional development (Ilomäki et al., 2016). DigCompEdu provides a comprehensive reference point for assessing and developing digital competences internationally, highlighting the universality of challenges in technology integration (Redecker, 2017).

Future research could specifically investigate the longitudinal effects of career ladder applications on teachers' digital competence and job satisfaction. Possible research questions to be prepared for this purpose could be `How do career advancement opportunities affect teachers' motivation to develop digital skills?` and `What is the effectiveness of targeted digital education programs on teaching practices and professional well-being over time?` In particular, qualitative studies examining teachers' professional motivations and life experiences related to institutional support could provide detailed information on the barriers and advantages to technology adoption.

Limitations

The fact that the study participants were teachers in Ankara limits the generalizability of the results to a broader population of teachers in Türkiye or internationally. Furthermore, the relatively small number of participants in certain subgroups, such as head teachers and school principals, limits the ability to conduct detailed subgroup analyses. Furthermore, data collection occurred during the early implementation phase of Türkiye's career ladder reform, potentially affecting teachers' perceptions of career satisfaction and related variables. Differences in technological infrastructure across the schools included in the study may have also influenced digital proficiency levels, but this was not systematically controlled. Future studies using longitudinal designs and stratified random sampling could address these limitations and yield more reliable findings by examining the factors that influence teachers' professional experiences.

Author Contributions

Arzu Altın: Conceptualization and research design, data collection, analysis and interpretation writing and editing the article.

Zühal Topcu: Conceptualization and research design, revising the article.

Declarations

Ethical Approval and Informed Consent

This study was approved by Gazi University Institutional Ethical Review Board. All procedures in this study were conducted in accordance with Gazi University Institutional Review Board's approved protocols. Written informed consent was obtained from the participants for their anonymized information to be published in this article.

Supplemental Material

There are no supplemental materials for this article.

Disclosure for AI Use

An AI-based language editing tool (ChatGPT, OpenAI) was used solely for language editing purposes during the preparation of this manuscript. No AI tools were used for content generation, data analysis, scientific interpretation, or development of the study's findings. All scientific content was produced and verified by the author(s).

References

Aditya, D. S. (2021). Embarking digital learning due to COVID-19: Are teachers ready?,. *Journal of Technology and Science Education*, *11*(1), 104-116. https://doi.org/10.3926/jotse.1109

Akiri, A. A., & Ugborugbo, N. M. (2009). Analytic examination of teachers' career satisfaction in public secondary schools. *Studies on Home and Community Science, 3*(1), 51-56. https://doi.org/10.5901/jesr.2014.v4n1p267

Ala-Mutka, K. (2011). Mapping digital competence: Towards a conceptual understanding. *Sevilla: Institute for Prospective Technological Studies*, *7*-60. http://dx.doi.org/10.13140/RG.2.2.18046.00322

Almås, A. G., Bueie, A. A., & Aagaard, T. (2021). From digital competence to Professional Digital Competence: Student teachers' experiences of and reflections on how teacher education prepares them for working life. *Nordic Journal of Comparative and International Education (NJCIE), 5*(4), 70-85. https://hdl.handle.net/11250/2975957

Almazova, N., Krylova, E., Rubtsova, A., & Odinokaya, M. (2020). Challenges and opportunities for Russian higher education amid COVID-19: Teachers' perspective. *Education Sciences, 10* (12), 368. https://doi.org/10.3390/educsci10120368

Antonietti, C., Cattaneo, A., & Amenduni, F. (2022). Can teachers' digital competence influence technology acceptance in vocational education? *Computers in Human Behavior, 132*(February), 107266. https://doi.org/10.1016/j.chb.2022.107266

Avcı, U., & Turunç, Ö. (2012). The impact of transformational leadership and organizational trust on career satisfaction: mediating role of leader-member exchange quality. *Alanya International Faculty of Business, 4*(2), 45-55.

Bartosiewicz, A., Łuszczki, E., Zaręba, L., Kuchciak, M., Bobula, G., Dereń, K., & Król, P. (2022). Assessment of job satisfaction, self-efficacy, and the level of professional burnout of primary and secondary school teachers in Poland during the COVID-19 pandemic. *PeerJ, 10*, e13349.

Bergström, A. (2017). Digital equality and the uptake of digital applications among seniors of different age. *Nordicom Review, 38*(s1), 79.

Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, science and technology education, 5(*3), 235-245.

Blau, G. (2001). On assessing the construct validity of two multidimensional constructs: Occupational commitment and occupational entrenchment. *Human Resource Management Review, 11*(3), 279-298.

Büyüköztürk, Ş. (2013). *Handbook of data analysis for social sciences* (18th ed.). Pegem Academy.

Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö., Karadeniz, Ş., & Demirel, F. (2008). *Scientific research methods*. Pegem Academy.

Caena, F. & Redecker, C. (2019). Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (Digcompedu). *European Journal of Education, 54*(3), 356-369.

Carretero, S., Vuorikari, R., & Punie, Y. (2017). *DigComp 2.1: The digital competence framework for citizens*. https://publications.jrc.ec.europa.eu/repository/handle/JRC106281

Carroll, A., Forrest, K., Sanders-O'Connor, E., Flynn, L., Bower, J. M., Fynes-Clinton, S., ... & Ziaei, M. (2022). Teacher stress and burnout in Australia: Examining the role of intrapersonal and environmental factors. *Social Psychology of Education, 25(*2), 441-469.

Cascio, W. F. (2015). *Managing human resources*. McGraw-Hill.

Chapman, D. W., & Lowther, M. A. (1982). Teachers' satisfaction with teaching. *The Journal of Educational Research, 75*(4), 241-247. https://doi.org/10.1080/00220671.1982.10885388

Coldwell, M. (2017). Exploring the influence of professional development on teacher careers: Apath model approach. *Teaching and Teacher Education, 61*, 189-198.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Dai, W. (2023). An empirical study on English preservice teachers' digital competence regarding ICT self-efficacy, collegial collaboration and infrastructural support. *Heliyon, 9*(9). https://doi.org/10.1016/j.heliyon.2023.e19538

Demirtas, Z. (2010). Teachers' job satisfaction levels. *Procedia-Social and Behavioral Sciences, 9*,

1069-1073.

Derven, M. (2015). From career conversations to deliberate action: Manager-employee career discussions are the first step toward an all-encompassing organizational career development program. *TD Magazine, 69*(2), 62-67.

Direnzo, M. S., & Greenhaus, J. H. (2011). Job search and voluntary turnover in a boundaryless world: A control theory perspective. *Academy of Management Review, 36*(3), 567-589.

Drage, K. (2010). Professional Development: Implications for Illinois Career and Technical Education Teachers. *Journal of Career and Technical Education, 25*(2), 24-37.

Drossel, K., & Eickelmann, B. (2017). Teachers' participation in professional development concerning the implementation of new technologies in class: A latent class analysis of teachers and the relationship with the use of computers, ICT self efficacy and emphasis on teaching ICT skills. *Large-scale Assessments in Education, 5*(1), 1–13. https://doi.org/10.1186/s40536-017-0053-7

Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences, 118*(17), e2022376118. https://doi.org/10.1073/pnas.20223761188

European Commission (2021). *Digital education action plan (2021-2027): Resetting education and training for the digital age*. https://ec.europa.eu/education/education-in-the-eu/digitaleducation-action-plan_en

Eurydice, E. (2018). *Teaching careers in Europe: Access, progression and support*. European Commission.

Falloon, G. (2020). From digital literacy to digital competence: the teacher digital competency (TDC) framework. *Educational Technology Research and Development, 68*(5), 2449-2472. https://doi.org/10.1007/s11423-020-09767-4

Fernández-Batanero, J. M., Montenegro-Rueda, M., Fernández-Cerero, J., & García-Martínez, I. (2020). Digital competences for teacher professional development. Systematic review. *European Journal of Teacher Education, 45*(4), 513–531. https://doi.org/10.1080/02619768.2020.1827389

Ferrari, A. (2012). *Digital competence in practice: An analysis of frameworks* (*10*, p. 82116). Publications Office of the European Union.

From, J. (2017). Pedagogical digital competence between values, knowledge and skills. *Higher Education Studies, 7*(2), 43-50. http://doi.org/10.5539/hes.v7n2p43

Fwu, B. J. & Wang, H. H. (2002). The social status of teachers in Taiwan. *Comparative Education, 38*(2), 211–224. https://doi.org/10.1080/03500060220140584

García-Vandewalle García, J. M., García-Carmona, M., Trujillo Torres, J. M., & Moya Fernández, P. (2023). Analysis of digital competence of educators (DigCompEdu) in teacher trainees: The context of Melilla, Spain. *Technology, Knowledge and Learning, 28*(2), 585-612.

Garzón Artacho, E., Martínez, T. S., Ortega Martin, J. L., Marin Marin, J. A., & Gomez Garcia, G. (2020). Teacher training in lifelong learning: The importance of digital competence in

the encouragement of teaching innovation. *Sustainability, 12*(7), 2852. https://doi.org/10.3390/su12072852

Garzón Artacho, E., Sola Martínez, T., Romero Rodríguez, J. M., & Gómez García, G. (2021). Teachers' perceptions of digital competence at the lifelong learning stage. *Heliyon, 7*(7), e07513. https://doi.org/10.1016/j.heliyon.2021.e07513

Gattiker, U. & Larwood, L. (1989). Career success, mobility and extrinsic satisfaction of corporate managers. *Social Science Journal, 26*, 75-92.

Ghomi, M., & Redecker, C. (2019). Digital competence of educators (DigCompEdu): Development and evaluation of a self-assessment instrument for teachers' digital competence. *CSEDU, 1*, 541–548. https://doi.org/10.5220/0007679005410548

Gomez Garcia, M. (2015). ICT in Educational environments. *Edmetic, 4*(2), 3–6. https://doi.org/10.21071/edmetic.v4i2.3959

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of management Journal, 33*(1), 64-86. https://doi.org/10.2307/256352

Griffin, R. W. (1993). *Management*. Houghton Mifflin.

Haddon, L. (2000). Social exclusion and information and communication technologies: Lessons from studies of single parents and the young elderly. *New Media & Society, 2*(4), 387-406.

Hatos, A., Cosma, M. L., & Clipa, O. (2022). Self-assessed digital competences of Romanian teachers during the COVID-19 Pandemic. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.810359

Hazni, E., & Nurhaida, I. (2024). The influence of digital mindset, digital competence and leadership style on employee career development. *Siber International Journal of Education Technology (SIJET), 1*(3), 90-108.

Herzberg, F. (1966). *Work and the Nature of Man*.

Heslin, P. A. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior, 26*(2), 113-136.

Hew, K., & Brush, T. (2007). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational Technology Research & Development, 55*(3), 223-252.

Hoyle, E. (2001). Teaching: Prestige, status and esteem. *Educational Management & Administration, 29*(2), 139–152. https://doi.org/10.1177%2F0263211X010292001

Hirschi, A., Herrmann, A., Nagy, N., & Spurk, D. (2016). All in the name of work? Nonwork orientations as predictors of salary, career satisfaction, and life satisfaction. *Journal of Vocational Behaviour, 95,* 45-57.

Ignat, A. A., & Clipa, O. (2012). Teachers' satisfaction with life, job satisfaction and their emotional intelligence. *Procedia-Social and Behavioral Sciences, 33*, 498-502.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis.

American Educational Research Journal, 38(3), 499-534.

Ilomäki, L., Kantosalo, A., & Lakkala, M. (2011). *What is digital competence?*. In Linked portal (pp. 1-12). European Schoolnet (EUN). http://linked.eun.org/web/guest/in-depth3

Ilomäki, L., Paavola, S., Lakkala, M., & Kantosalo, A. (2016). Digital competence–an emergent boundary concept for policy and educational research. *Education and information technologies*, *21*, 655-679. https://doi.org/10.1007/s10639-014-9346-4

International Society for Technology in Education. (2000). *National educational technology standards for students: Connecting curriculum and technology*. ISTE.

Instefjord, E. (2015). Appropriation of digital competence in teacher education. *Nordic Journal of Digital Literacy, 10*(Jubileumsnummer), 155-171.

Iqbal, A., Azız, F., Farooqı, T. K., & Alı, S. (2016). Relationship between teachers' job satisfaction and students' academic performance. *Eurasian Journal of Educational Research, 16*(65), 335-344. http://dx.doi.org/10.14689/ejer.2016.65.19

Itsekor, V., & Oyewole, O. J. (2013). *Digital literacy skills as determinants of job satisfaction and career progression of academic library staff*. https://harvest.usask.ca/server/api/core/bitstreams/d90544ce-75f3-4e11-b1ba-e1cf4ef3a71d/content

Joint Information Systems Committee. (2012). *Developing digital literacies*. Retrieved from https://www.jisc.ac.uk/guides/developing-digital-literacies

Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz Jr, R. D. (1995). An empirical investigation of the predictors of executive career success. *Personnel Psychology, 48*(3), 485 519.

Khan, A. (2021). Impacts of technology skills on generic job satisfaction, and assessment of training needs: A case of pakistani librarians. *Library Philosophy and Practice* (e-journal). 5345. https://digitalcommons.unl.edu/libphilprac/5345

König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education, 43*(4), 608-622. https://doi.org/10.1080/02619768.2020.1809650

Krumsvik, R. A. (2011). Digital competence in Norwegian teacher education and schools. *Högre Utbildning, 1*(1), 39-51.

Lakkala, M., Ilomäki, L., & Kantosalo, A. (2011). *Which areas of digital competences are important for a teacher?* In Linked portal. European Schoolnet. http://hdl.handle.net/10138/154427

Li, M., & Yu, Z. (2022). Teachers' satisfaction, role, and digital literacy during the COVID-19 pandemic. *Sustainability, 14*(3), 1121. https://doi.org/10.3390/su14031121

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry, 15*(2), 103-111.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017-1054.

Morris, P. E. (2021). *Teachers and Tech: The relationship between motivation to incorporate educational technology and teacher job satisfaction*. Centenary University.

Nauta, A., Van Vianen, A., Van der Heijden, B., Van Dam, K. & Willemsen, M. (2009). Understanding the factors that promote employability orientation: the impact of employability culture, career satisfaction, and role breadth self-efficacy. *Journal of Occupational and Organizational Psychology, 82(*2), 233-251.

Nemeskeri, Z., Szello, J., Zadori, I., & Barakonyi, E. (2016). Digital competencies and career orientation in the 21st century: Hungarian labor market approach. *Romanian Statistical Review Supplement, 64*(12), 117-131.

Nunnally J. C., Bernstein I. H. (1994). *Psychometric theory (3rd ed.).* McGraw-Hill.

One, C. (2017). *The digital edge: Middle-skill workers and careers*. https://apo.org.au/node/208931

Organisation for Economic Co-operation and Development. (2019). *OECD skills outlook 2019: Thriving in a digital world*. OECD.

Orpen, C. (1994). The effects of organizational and individiual career management on career success. *International Journal Of Manpower, 15*(1), 27-37.

Oubibi, M., Fute, A., Xiao, W., Sun, B., & Zhou, Y. (2022). Perceived organizational support and career satisfaction among Chinese teachers: the mediation effects of job crafting and work engagement during COVID-19. *Sustainability, 14*(2), 623. https://doi.org/10.3390/su14020623

P21: Partnership for 21st Century Learning. (2019). *P21 framework for 21st century learning definitions*. Battelle for Kids. https://www.battelleforkids.org/insights/p21-resources/

Pachulicz, S. Schmitt, N. & Kuljanin, G. (2008). A model of career success: A longitudinal study of emergency physicians. *Journal of Vocational Behavior, 73*, 242-253.

Peluchette, J. V. E. (1991*). Individual difference, family, and organizational factors influencing career success and career satisfaction*. Carbondale: Southern Illinois University.

Prensky, M. (2001), Digital natives, digital immigrants Part 2: Do they really think differently?, *On the Horizon, 9*(6), 1-6. https://doi.org/10.1108/10748120110424843

Prieto-Ballester, J. M., Revuelta-Domínguez, F. I., & Pedrera-Rodríguez, M. I. (2021). Secondary school teachers self-perception of digital teaching competence in spain following COVID-19 confinement. *Education Sciences, 11*(8), 407.

Redecker, C. (2017). *European framework for the digital competence of educators: DigCompEdu*. European Commission. Y. Punie (Ed.), JRC science for policy report. Publications Office of the European Union. https://doi.org/10.2760/159770

Reisoğlu, İ. & Çebi, A. (2020). How can the digital competences of pre-service teachers be developed? Examining a case study through the lens of DigComp and DigCompEdu. *Computers & Education*, *156*, https://doi.org/10.1016/j.compedu.2020.1039400

Richards, K., Washburn, N., Carson, R. L., & Hemphill, M. A. (2017). A 30-year scoping review of the physical education teacher satisfaction literature. *Quest, 69*(4), 494-514.

Rogers, E. M., (2003). *Diffusion of Innovations*. The Free Press.

Romero García, C., Buzón García, O., & de Paz Lugo, P. (2020). Improving future teachers' digital competence using active methodologies. *Sustainability, 12*(18), 7798. https://doi.org/10.3390/su12187798

Sahito, Z., & Vaisanen, P. (2017). Effect of ICT skills on the job satisfaction of teacher educators: Evidence from the universities of the Sindh Province of Pakistan. *International journal of higher education, 6*(4), 122-136. https://doi.org/10.5430/ijhe.v6n4p122

Scherer, R., Howard, S. K., Tondeur, J., & Siddiq, F. (2021). Profiling teachers' readiness for online teaching and learning in higher education: Who's ready?. *Computers in human behavior, 118*, 106675.

Seibert, S. E., & Kraimer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behaviour, 58*(1), 1-21.

Skantz-Åberg, E., Lantz-Andersson, A., Lundin, M., & Williams, P. (2022). Teachers' professional digital competence: an overview of conceptualisations in the literature. *Cogent Education, 9*(1). https://doi.org/10.1080/2331186X.2022.2063224

Soeprijanto, S., Diamah, A., & Rusmono, R. (2022). The effect of digital literacy, self-awareness, and career planning on engineering and vocational teacher education students' learning achievement. *JOTSE, 12*(1), 172-190. https://doi.org/10.3926/jotse.1434

Stearns, E., Banerjee, N., Moller, S., & Mickelson, R. A. (2015). Collective pedagogical teacher culture and teacher satisfaction. *Teachers College Record, 117*(8), 1-32.

Tantawy, N. (2020). Investigating teachers' perceptions of the influence of professional development on teachers' performance and career progression. *Arab World English Journal (AWEJ), 11*(1), 181-194.

Toker, T., Akgün, E., Cömert, Z., & Sultan, E. (2021). Digital competence scale for educators: Adaptation, validity and reliability study. *National Education Journal, 50* (230), 301-328. https://doi.org/10.37669/milliegitim.801607

Tondeur, J., Hermans, R., van Braak, J., & Valcke, M. (2008). Exploring the link between teachers' educational belief profiles and different types of computer use in the classroom. *Computers in Human Behavior, 24*(6), 2541–2553. https://doi.org/10.1016/j.compedu.2007.05.003

Toropova, A., Myrberg, E., & Johansson, S. (2021). Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational review, 73*(1), 71-97. https://doi.org/10.1080/00131911.2019.1705247

Weng, Q. & McElroy, J.C. (2012). Organisational career growth, affective occupational commitment and turnover intentions. *Journal of Vocational Behavior, 80*, 256-265.

Williamson, J., Pemberton, A, E., & Lounsbury, J. W. (2005). An investigation of career and job satisfaction in relation to personality traits of ınformation professionals. *The Library Quarterly: Information, Community, Policy, 75*(2), 122-141.

Yüksel, İ. (2005) The relationship of work-family conflict with career satisfaction, job satisfaction, and work behavior. *Ataturk University Journal of Economics and Administrative Sciences,*

19 (2), 301-314.

Zhao, Y., Pinto Llorente, A. M., Sánchez Gómez, M. C., & Zhao, L. (2021). The impact of gender and years of teaching experience on college teachers' digital competence: An empirical study on teachers in gansu agricultural university. *Sustainability, 13*(8), 4163.

Uluslararası Eğitim Programları ve Öğretim Çalışmaları Dergisi
***15*(2), 2025, 236-268**
www.ijocis.com

TÜRKÇE GENİŞ ÖZET

Öğretmenlerin Dijital Yeterlik ve Kariyer Memnuniyeti Algıları Arasındaki İlişkinin İncelenmesi

Dijitalleşme, öğretmenlerin kariyerlerinde önemli bir etken haline gelirken öğretmenlerin dijital yeterlikleri geliştirme süreçleri eğitim sistemlerinde ve işgücü piyasasında önemli değişimlere yol açmaktadır. Öğretmenlerin dijital yeterlik algıları ile öğretmenlik mesleğini bir kariyer mesleği olarak değerlendirmeleri arasındaki ilişkinin hizmet içi öğretmenlerin gözünden incelenmesi, günümüz eğitim ortamlarında dijitalleşmenin değerlendirilmesine olanak sağlayabilir. Bu araştırma, mesleki kıdemin öğretmenlerin dijital yeterlilik algıları üzerindeki etkisini açıklığa kavuşturmanın yanı sıra, bu algıların mesleki kimlik ve bağlılıkla olan ilişkisine yönelik kapsamlı bir anlayış geliştirilmesine katkıda bulunacaktır. Bu çalışmada, öğretmenlerin dijital yeterlik algı düzeyi ile kariyer memnuniyetleri arasındaki ilişki cinsiyet, kıdem, ünvan ve eğitim durumu değişkenlerine göre incelenmiştir. Çalışmanın bulgularına göre, öğretmenlerin dijital yeterlik algı düzeyi ile kariyer memnuniyetleri orta düzeydedir. Bununla birlikte, öğretmenlerin büyük bir çoğunluğunun entegratör (B1) düzeyde olduğu ve dijital yeterlilik algılarının öğrenim düzeyi arttıkça yükseldiği görülmektedir. Ayrıca, öğretmenlerin mesleki kıdemi arttıkça kariyer memnuniyet düzeyinin azaldığı görülmektedir. Eğitimin ön saflarında yer alan öğretmenlerin sınıf içinde hissedecekleri yetkinlik duygusu, onların mesleki memnuniyet düzeyinin yükselmesine katkı sağlayabilmektedir. Öğrenme ve öğretme süreçleri için teknolojinin kullanımını teşvik eden eğitim programları, dijital becerilerinin ve bilgilerinin geliştirilmesi yoluyla öğretmenlerin kariyer memnuniyet algılarını artırabilir ve öğretmenlerin öğrencilerine faydalı bir rol model olmalarına yardımcı olabilir.

Giriş

Çevrimiçi teknoloji tabanlı eğitim platformları, öğretmenlerin ve öğrencilerin eğitimlerini sürdürebilmeleri açısından vazgeçilmez bir yapı hâline gelmiştir. Eğitimin ön saflarındaki sağlayıcılar olarak öğretmenler, her düzeydeki eğitimin çevrimiçi sanal öğrenme platformları aracılığıyla geliştirildiği öğretim ve öğrenme ortamlarında giderek daha önemli hâle gelmektedir. Öğretim sürecinin çeşitli boyutlarının birbirine bağlı olduğu dikkate alındığında, sanal öğrenme uygulamalarının kullanımı öğretmenlerin mesleki motivasyonunu önemli bir artıran bir kaynak olarak değerlendirilebilir. Öğretmenlerin dijital yeterligi, eğitim ortamında dijital kaynakları ve sanal öğrenme platformlarını kullanma yeteneğini gösterir. Dijital yeterliğe sahip öğretmenler, gelecekteki çevrimiçi veya sınıf içi uygulamalarda öğrencilerinin ve çalışma arkadaşlarının gözünde birer rol model olacaktır. Aslında günümüzde öğrenciler, dijital yerliler, (Prensky, 2001) hali hazırda teknoloji ile beraber büyüdüklerinden dolayı dijital becerileri genellikle öğretmenlerden bile daha iyi olabiliyor. Uluslararası araştırmalar öğretmenlerin

mesleki gelişimlerini daha yüksek öğretmen yeterliliği ile ilişkilendirmektedir (Coldwell, 2017). Oğretmenin mesleki gelisime olan eğilimi mesleki performansini, öğrencilerinin başarısını, mesleğine olan bağlılığını ve kariyer ilerlemesini olumlu etkileyen bir davranıştır. (Tantawy, 2020). Öğretmenlerin mesleki memnuniyetinin artırılması, eğitim sürecinin niteliğinin sürdürülebilirliği açısından kritik bir öneme sahiptir.

Bu araştırma, hizmet içi öğretmenlerin dijital öğretim yeterliklerine ilişkin öz algıları ile kariyer memnuniyetleri arasındaki ilişkiyi incelemeyi amaçlamaktadır. Bu amaçla aşağıdaki sorulara yanıt aranmıştır:

(1) Öğretmenlerin dijital yeterlik ve kariyer memnuniyet düzeyi nedir?

(2) Öğretmenlerin dijital yeterlik algı düzeyi cinsiyet, kıdem, ünvan ve eğitim durumu değişkenlerine göre farklılaşmakta mıdır?

(3) Öğretmenlerin kariyer memnuniyeti algıları cinsiyet, kıdem, ünvan ve eğitim durumu değişkenlerine göre farklılık göstermekte midir?

(4) Öğretmenlerin dijital yeterlik algı düzeyi ile kariyer memnuniyeti arasında anlamlı bir ilişki var mıdır?

Yöntem

Araştırma ilişkisel tarama modelinde nicel bir çalışmadır. Araştırma verileri kişisel bilgi formu, eğitimcilere yönelik dijital yeterlik ölçeği ve kariyer memnuniyeti ölçeği kullanılarak eş zamanlı olarak toplanmıştır. Araştırma 2022-2023 eğitim-öğretim yılı güz döneminde gerçekleştirilmiştir. Araştırma verileri Google Formlar aracılığıyla elektronik olarak toplanmıştır. Araştırmaya Ankara, Türkiye'de Milli Eğitim Bakanlığı'na bağlı devlet okullarında görev yapan 208 gönüllü öğretmen katılmıştır. Araştırmada öğretmenlerin dijital yeterlik düzeyini tespit etmek amacıyla özgün hâli Redecker (2017) tarafından oluşturulan ve Toker, Akgün, Cömert ve Sultan (2021) tarafından Türkçeye uyarlanan Eğitimciler için Dijital Yeterlilik Ölçeği (EDYÖ) ile öğretmenlerin kariyer memnuniyet algılarını tespit etmek için Greenhaus, Parasuraman ve Wormley (1990) tarafından geliştirilen Avcı ve Turunç (2012) tarafından Türkçeye uyarlaması yapılan Kariyer Memnuniyeti Ölçeği (KMÖ) kullanılmıştır.

Bulgular

Bu çalışmada öğretmenlerin dijital yeterlik algılama düzeyi ile kariyer memnuniyetleri arasındaki ilişki bazı değişkenlere göre incelenmiştir. Nicel bulgular, öğretmenlerin dijital yeterlilik puan ortalamasının ($\bar{X}$ = 44.3) 3. düzey olarak sınıflandırılan "bütünleştirici" (34–49 puan) grubunda olduğunu göstermektedir. Öğretmenlerin kariyer memnuniyet ölçeği puan ortalaması ise 3.04 olup orta seviyededir.

Bu çalışmada öğretmenlerin dijital yeterlik algılarının cinsiyet, ünvan ve kıdem değişkenine göre anlamlı şekilde değişmediği sonucuna ulaşılmıştır. Öğretmenler arasında dijital yeterlik algı düzeyinde sadece öğrenim değişkenine göre lisans mezunu ve lisansüstü eğitim gören öğretmenler arasında anlamlı farklılık görülmüştür. Araştırmanın dikkat çekici sonuçlarından birisi öğretmenlerin kariyer memnuniyet algı düzeyinde sadece kıdem değişkenine göre anlamlı farklılık bulunmasıdır. Kariyer memnuniyet puan ortalaması en yüksek grup ise 10-15

yıl arası kıdeme sahip olan öğretmenlerdir. Korelasyon analizi sonuçlarına göre öğretmenlerin dijital yeterlik algılama düzeyi ile kariyer memnuniyetleri arasında düşük düzeyde pozitif bir ilişki bulunmuştur.

Tartışma

Öğretmenlerin dijital yeterlik düzeyini ve kariyer memnuniyetlerini inceleyen bu çalışmanın sonuçları, öğretmenlerin hem dijital yeterlik ($\bar{X}$ = 3,22) hem de kariyer memnuniyeti ($\bar{X}$ = 3,04) açısından orta düzeyde olduğunu ortaya koymuştur. Dijital yeterlik analizi sonuçları, öğretmenlerin en büyük oranının (%36,1) Entegratör B1 seviyesinde olduğunu, yani dijital teknolojileri öğretim uygulamalarına entegre etme ve farklı bağlamlarda deneme konusunda yetkin olduklarını göstermiştir. Ayrıca, %26,4'ü Uzman B2 ve %22,6'sı Kaşif A2 olarak sınıflandırılmıştır. Bu sonuçlar, öğretmenlerin önemli bir kısmının dijital yeterliliğe sahip olduğunu, ancak bu becerileri daha da geliştirmek için sürekli mesleki gelişimin önemine dikkat çekmektedir. Bu doğrultuda, Kaşif A2 seviyesindeki öğretmenlerin, akran rehberliği ve iş birliği yoluyla desteklenebilecek rehberliğe, teşvike ve ilhama ihtiyaçları olduğu söylenebilir. Nitekim dijital yetkinliği daha üst düzey öğretmenler, özellikle Uzman B2, okullarda inovasyon için katalizör görevi görebilir ve dijital dönüşümü desteklemesi bu açıdan faydalı olacaktır.

Araştırmaya katılan öğretmenlerin algılarına göre Dijital yeterliğin alt alanları arasında *Dijital Kaynaklar* alanı en yüksek ortalamayı göstermiştir. Bu alandaki öğretmenler, dijital sınavlar, e-portföyler ve eğitsel oyunlar dahil olmak üzere değerlendirme, geri bildirim ve planlama için dijital araçları kullanma becerisini göstermektedir. Bu yeterlikler hem okulun altyapısından hem de öğretmenlerin kişisel yeterliklerinden ve teknolojiye erişiminden etkilenmektedir. Bu durumun aksine, en düşük puanlar, bilgi okuryazarlığı, dijital iletişim, içerik oluşturma ve sorumlu teknoloji kullanımını kapsayan *Öğrencilerin Dijital Yeterliliğini Kolaylaştırma* alanında bulunmuştur. Özellikle kapsayıcı ortamlarda, farklı ihtiyaçları olan öğrencileri destekleyen öğretmenler, bu becerileri güçlendirmek için hedefli eğitim ve kaynaklar almalıdır (Skantz-Åberg vd., 2022). T-testleri ve ANOVA analizleri, dijital yeterlikte cinsiyet, unvan veya hizmet yılına göre anlamlı bir fark ortaya koymamıştır. Ancak, eğitim düzeyine göre anlamlı bir fark ortaya çıkmıştır: Lisansüstü dereceye sahip öğretmenler, lisans derecesine sahip olanlara göre daha yüksek dijital yeterliliğe sahiptir ($p < .05$). Bu bulgu, yüksek öğrenimin daha fazla teknolojik yeterlik sağladığını gösteren bazı çalışmalarla tutarlıdır (García-Vandewalle García vd., 2023). Ancak yine de bu sonuç neticesinde formal eğitimin yeterli olduğunu söylemek doğru olmayabilir; öğretmenlerin ayrıca teknolojik, pedagojik ve içerik bilgisi (TPACK) geliştirmeleri gerekmektedir (Mishra ve Koehler, 2006).

Öğretmenler orta düzeyde kariyer memnuniyeti bildirmişlerdir ($\bar{X}$ = 3,04). Cinsiyet, unvan veya eğitim düzeyine göre anlamlı bir fark bulunamamıştır. Sadece kıdeme göre kariyer memnuniyeti algısı değişmektedir: 10-15 yıllık deneyime sahip öğretmenler en memnun olanlardır ($\bar{X}$ = 3,22), 26+ yıllık deneyime sahip olanlar ise en düşük memnuniyeti bildirmektedir ($\bar{X}$ = 2,71). Deneyimle birlikte görülen bu düşüş tükenmişlikle (Maslach ve Leiter, 2016) ve yetersiz ücret veya takdir gibi dışsal memnuniyetsizlikle (Herzberg, 1966; Akiri ve Ugborugbo, 2009) ilişkili olabilir. Diğer taraftan memnuniyetin kıdemli öğretmenler arasında sabitlenebileceğini veya artabileceğini belirten çalışmalar mevcuttur (Ingersoll, 2001). Çalışmanın son aşamasında dijital yeterlik ve kariyer memnuniyeti arasında düşük pozitif bir korelasyon bulunmuştur. Buradan hareketle kendilerini dijital olarak daha yetkin olarak

algılayan öğretmenlerin kariyerlerinden de memnun olduklarını göstermektedir. Bu ilişki mütevazı olsa da, dijital güçlendirmenin mesleki refaha katkısını vurgulamaktadır. Kariyer memnuniyeti, okul kültürü, yönetici desteği ve gelişim fırsatları gibi birtakım faktörlerden etkilenmektedir (Chapman ve Lowther, 1982). İçsel motivasyon, öğretmenlerin sürekli öğrenmeye ve teknolojik yeniliğe olan bağlılıklarını sürdürmede özellikle güçlü bir rol oynamaktadır (Drage, 2010). Mesleki gelişimi artırmak ve öğretmenlerin katkılarını takdir etmek hem memnuniyeti hem de katılımı artırabilir (Derven, 2015; Fwu ve Wang, 2002).

Sonuç ve Öneriler

Araştırmada çalışma grubunda yer alan öğretmenlerin görüşlerine göre elde edilen bulgular öğretmenlerin dijital yeterlik düzeyi ile kariyer memnuniyet düzeyi arasında düşük düzeyde pozitif ilişki olduğu görülmüştür. Bu doğrultuda öğretmenlerin kariyer memnuniyetleri ile dijital yeterlik düzeyi algıları arasında bir ilişki mevcuttur ancak aralarındaki ilişkiye etki eden bireysel, örgütsel veya yönetsel kaynaklı olabilir. Elde edilen bulgular neticesinde akademik gelişim öğretmenlerin dijital yeterlik algısı üzerinde olumlu katkı yapmaktadır. Akademik çalışma yapabilmek için asgari düzeyde bilgisayar ve teknoloji kullanımı gerekmektedir. Araştırmanın çalışma grubunda yüksek lisans ve doktora eğitimi alan az sayıda öğretmen olmasına rağmen öğretmenlerin aldıkları eğitim arttıkça dijital yeterlik puanları artmaktadır. Öte yandan öğretmenlerin kıdemleri arttıkça kariyer memnuniyet düzeyi düşmektedir. Bu bulgu, öğretmenlerin mesleki kıdemleri arttıkça hak ettikleri takdiri göremediklerine yönelik algılarının güçlendiğini göstermektedir.