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Research Article

Analysis of language teachers' digital literacy levels in terms of various variables

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In this research, we conducted an examination of the digital literacy proficiency of educators specializing in Turkish Language, considering several crucial variables. The study aimed to explore the digital literacy competence of teachers in relation to factors such as age, years of experience, computer ownership, duration of computer usage, internet usage time, and participation in social media platforms. We employed a quantitative research approach for this investigation, employing a survey model designed to collect data from a broad sample, thus capturing essential characteristics of this group. The research population encompassed Turkish and Turkish Language and Literature teachers employed in educational institutions under the Ministry of National Education in Turkey. The study's sample consisted of educators working in the Eastern Anatolia Region during the year 2023, selected using a convenience sampling method. To assess the digital literacy levels of these teachers concerning various factors, we employed the Digital Literacy Scale, originally developed by Ng (2012). This scale comprises four dimensions: attitude, cognitive, technical, and social, encompassing a total of 17 items. The scale's validity and reliability were confirmed in a prior study conducted by Hamutoğlu et al. (2017). Participants provided responses on a 5-point Likert scale ranging from 5 (Strongly Agree) to 1 (Strongly Disagree). For the data analysis, we utilized SPSS 26 statistical software. Descriptive statistics (% and f) were used for data presentation, while independent samples t-tests were employed to identify score variations associated with variables such as gender, personal computer ownership, and possession of social media accounts. Additionally, one-way ANOVA tests were conducted to analyze age and years of experience, while another one-way ANOVA analysis was performed to assess score differences based on the duration of computer usage. The findings of the study revealed that Turkish and Turkish Language and Literature teachers generally exhibit effective utilization of information and communication technologies in their professional practices. Gender was found to have no significant impact on digital literacy levels, whereas owning an individual computer and active engagement in social media positively correlated with teachers' digital literacy competencies. Furthermore, the study demonstrated a tendency for digital literacy levels to decrease with increasing years of experience among educators.

Keywords: Turkish teachers, Turkish language and literature teachers, digital literacy, 21st-century skills

1. Introduction

The European Union [EU], along with institutions and organizations like UNESCO, has been developing policies and conducting programs to enhance the digital literacy levels of citizens in many countries. Due to the rapid advancements in technology, the concept of literacy has evolved, giving way to the concept of digital literacy. Literacy has transformed from analog to digital and has become one of the key skills individuals need in the 21st century. This skill assists individuals in obtaining accurate information from digital sources, creating valuable content, adhering to ethical rules, avoiding unnecessary time wastage, and effectively benefiting from technology.

In the contemporary era, digital literacy has become just as indispensable as traditional literacy, which is essential for mastering skills like reading, writing, mathematics, and social interaction (UNESCO, 2011). The definition of digital literacy, a concept of growing significance, remains somewhat fluid, with various terms often used interchangeably. The initial delineation of digital literacy by Gilster (1997) has given rise to related concepts like digital literacy skills, media literacy,

multiple literacies, and digital competence. Among these, digital competence stands out as the term closest in meaning to digital literacy (Ilomäki et al., 2016).

The European Commission, in its report on the Digital Competence Framework for EU citizens, outlines the essential skills that citizens should possess, encompassing areas like "Accessing and Managing Digital Data and Information," "Communication and Collaboration," "Problem Solving," "Creating Digital Content," and "Safety" (Carretero et al., 2017). The European Commission [EC] defines digital literacy as the capacity to describe, comprehend, articulate, create, and interpret ideas using visual and auditory digital materials (EC, 2019). Estad (2006) describes digital competence as the ability to operate technological applications and harness technology to fulfill personal and collective needs. The P21 characterizes digital literacy as the knowledge, media, and technology skills imperative for individuals in the 21st century (Framework for 21st Century Learning, 2019). Digital literacy extends beyond mere reading and writing; it encompasses the skill of utilizing digital tools to express concepts, reach broader audiences, and engage with diverse individuals and ideas globally (Vega, 2011). Digital literacy is both an essential capability and a responsibility for the youth of the 21st century (Karakuş Yılmaz, 2020).

Digital literacy constitutes a foundational competency area in which Information and Communication Technologies [ICT] are comprehensively integrated into educational institutions (Krumsvik, 2009). Recognized as a preference factor and a job market advantage by employers, digital literacy encompasses proficiencies related to information access, integration, content creation, and effective communication (UNESCO, 2011). Digital literacy necessitates the adept use of various technologies and entails the capacity to access, generate, share, and utilize technology effectively within the realms of learning and teaching (Hamutoğlu et al., 2017).

In the context of everyday learning activities, the utilization of ICT pertains to the technical dimension of digital literacy. Conversely, the cognitive facet pertains to students' aptitude to search for digital information, critically assess it, and scrutinize it from a discerning standpoint. The social-emotional dimension of digital literacy encompasses students' abilities to employ ICT for communication, collaboration, and the attainment of various social objectives (Ng, 2012). According to Prensky (2001), digital natives, born after the year 2000, have been raised in an environment fully immersed in technology, exhibiting a distinct learning style compared to previous generations.

1.1. Significance of the Study

Digital natives possess a culture of establishing online connections and sharing. They access information through the internet, communicate with others (such as blogging, online gaming, downloading music, online shopping), and interact on social media networks. Therefore, digital literacy education has been included in the curricula or policies of many countries to respond to the needs of the digital generation. However, teachers who will provide this education need to question their own levels of digital literacy because teachers currently in service are generally considered digital immigrants. They need to keep up with technological innovations, participate in professional development programs, and enhance their digital literacy skills. Given that technological tools and resources are constantly changing, it is important for teachers to adapt to this change and continually renew themselves.

As new technologies continue to advance, an educational knowledge gap or digital disparity is emerging, distinguishing students who have access to technology from those who do not. The prospects for enhancing the digital literacy skills of students lacking access to digital technology are rather limited (Vega, 2011). It falls upon teachers to create equitable opportunities for all students to harness digital technologies and acquire digital literacy competencies within the school environment. To achieve this goal, it is imperative for teachers themselves to possess a high degree of digital literacy. This underscores the critical issue of assessing teachers' digital literacy competence. Given the rapid evolution of digital technologies, teachers must stay well-informed

about these developments and innovations to effectively impart digital literacy education to the digitally native generation.

Within the literature, diverse research endeavors have explored the realm of digital literacy. These investigations have delved into areas such as digital storytelling and the utilization of technology by Turkish language teachers (Kurudayıoğlu & Bal, 2014), the digital literacy of prospective teachers (Çetin, 2016; Kıyıcı, 2008; Ocak & Karakuş, 2019; Özerbaş & Kuralbayeva, 2018; Üstündağ et al., 2017), media literacy concerning both students and educators (Karaman & Karataş, 2009; Tan, 2015), and the imparting of media literacy skills to students through game programming (Morgan, 2015; Gregg, 2014). Moreover, investigations have delved into the information literacy of teachers and prospective educators (Akkoyunlu & Yılmaz, 2005; Jorden, 2011; Özel, 2013), as well as the technological literacy of teacher candidates and instructors (Bölükbaşı, 2012). These studies have scrutinized the competency levels of students or teacher candidates concerning various forms of literacy and have provided recommendations for their enhancement. In contrast, this particular research focuses specifically on the digital literacy of Turkish language and literature teachers within the context of significant variables. In doing so, it aspires to make a meaningful contribution to the field.

The research addresses the following research questions:

RQ 1) To what degree do Turkish language and literature instructors demonstrate proficiency in digital literacy?

RQ 2) Are there notable discrepancies in digital literacy proficiency among Turkish language and literature teachers?

RQ 3) Do substantial variations exist in digital literacy proficiency between male and female Turkish language and literature teachers?

RQ 4) Is there a significant differentiation in digital literacy proficiency between Turkish language and literature educators who possess personal computers and those who do not?

RQ 5) Does a noteworthy disparity exist in digital literacy proficiency between Turkish language and literature teachers with active social media memberships and those without?

RQ 6) Is there a marked divergence in digital literacy proficiency among Turkish language and literature instructors with differing levels of seniority?

RQ 7) Do substantial differences emerge in digital literacy proficiency among Turkish language and literature teachers with varying durations of computer usage?

2. Methodology

2.1. Research Design

This study adhered to a quantitative research methodology, which is an approach that involves the collection, analysis, and interpretation of numerical data. Quantitative research is commonly employed, particularly when researchers seek to derive numerical outcomes through hypothesis testing, surveys, and measurement instruments (Karasar, 2009). In the context of this research, the survey model served as the chosen research design, with the objective of gathering data to elucidate specific attributes pertaining to sizable sample cohorts. The survey model is particularly well-suited for extensive participant pools and aims to amass data for the characterization of a distinct group (Büyüköztürk et al., 2011). Given that this study utilized a Likert-type scale crafted to assess the speaking anxiety of teacher candidates, the survey model was deemed the most appropriate research framework in accordance with the research's inherent nature.

2.2. Population and Sample

The study encompasses Turkish Language and Literature educators employed within educational institutions affiliated with the Turkish Ministry of National Education. The research sample, drawn through convenience sampling, comprises educators currently serving in a province situated in the Eastern Anatolia Region during the year 2023. Subsequent to the provision of requisite ethical guidance, participants were presented with the scale items. Data collection was

facilitated through an online form, with participants voluntarily engaging in the process and being granted unrestricted time to complete the survey. Detailed participant information is delineated in Table 1.

Table 1
Demographic information of the participants

Variables		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*Total*
Gender		Female	Male						
	n	46	50						96
	%	47.9	52.1						100
Branch		Turkish T.	TLL T.						-
	n	45	51						96
	%	46.9	53.1						100
Individual		Yes	No						-
Computer	*n*	70	26						96
Status		72.9	27.1						
	%								100
Social media		Yes	No						-
use	*n*	62	34						96
	%	64.6	35.4						100
Seniority		0-2	2-5	6-10	11-15	16-20	21-25	26 and over	-
	n	11	24	19	20	12	7	3	96
	%	11.5	25	19.8	20.8	12.5	7.3	3.1	100
Daily CP		Less than 1 hour	1-2	2-3	3-4	4-5	5 and over		-
Usage Time	n	26	38	15	6	4	7		96
	%	27.1	39.6	15.6	6.3	4.2	7.3		100

As seen in Table 1, when examining the gender distribution, 47.9% of the participants are female, while 52.1% are male. When analyzed by field, there is a relatively balanced distribution between Turkish language teaching (46.9%) and Turkish Language and Literature teaching (53.1%). In terms of individual computer ownership, 72.9% of the participants own a computer, while 27.1% do not have one. Regarding social media usage, 64.6% of the participants use social media. Looking at the distribution based on seniority, participants have varying levels of experience, with the largest group having 2-5 years of seniority (25%). When daily computer usage time is examined, the majority of participants use computers for 1-2 hours daily (39.6%).

2.3. Data Collection Tool

To collect data and assess teachers' digital literacy levels across various variables, we utilized the Digital Literacy Scale developed by Ng (2012). This instrument comprises four distinct factors: attitude, cognitive, technical, and social, encompassing a total of 17 items. The scale's validation and reliability were established through the diligent work of Hamutoğlu et al. (2017). Respondents expressed their agreement or disagreement using a 5-point Likert-type format, where 5 denoted "Strongly Agree," and 1 represented "Strongly Disagree." Notably, the scale exclusively contains positively oriented items without any reverse-scored questions. These items are distributed as follows: 7 items pertain to the attitude factor (items 1-7), 6 items relate to the technical factor (items 8-13), 2 items concern the cognitive factor (items 14-15), and the remaining 2 items address the social factor (items 16-17). The potential scoring range spans from a minimum of 17 to a maximum of 85. Furthermore, the scale exhibited commendable internal consistency, as evidenced by a Cronbach's alpha coefficient of .93.

2.4. Analysis of Data

To analyze the data collected in this study, we harnessed the power of the SPSS 26 statistical software package. The examination of data was approached through the lens of descriptive statistics, represented as percentages (%) and frequencies (f). To delve deeper into the data, we

conducted independent samples t-tests, aiming to uncover variations in scores concerning participants' gender, individual computer ownership, and their status regarding social media accounts. These statistical assessments adhered to the assumption of normal distribution. For variables related to age and seniority, we employed one-way ANOVA, a robust analytical tool. Subsequently, post hoc analysis was conducted post-ANOVA to discern specific score differences stemming from varying durations of computer usage.

3. Findings

3.1. Results for the First Research Question of the Study

Descriptive analysis results regarding the digital literacy levels of Turkish language and literature teachers are presented in Table 2.

Table 2
Percentage (%) and frequency (f) findings of Turkish language and literature teachers' digital literacy levels in the context of items

	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	f	%
I enjoy using Information and Communication Technologies (ICT) in the learning process.	1	1.0	1	1.0	5	5.2	28	29.2	61	63.5
I learn better by using Information and Communication Technologies (ICT).	1	1.0	3	3.1	3	3.1	42	43.8	47	49.0
Learning through the use of Information and Communication Technologies (ICT) is more engaging to me.	1	1.0	2	2.1	4	4.2	51	53.1	38	39.6
Using Information and Communication Technologies (ICT) for learning motivates me more.	0	0.0	1	1.0	8	8.3	50	52.1	37	38.5
I frequently seek help from my friends via the Internet (Skype, Facebook, blogs, etc.) for my learning activities.	2	2.1	23	24.0	21	21.9	36	37.5	14	14.6
Using Information and Communication Technologies (ICT) for learning enables me to be self-directed and independent.	0	0.0	5	5.2	11	11.5	59	61.5	21	21.9
I know how to solve technical problems that I encounter.	0	0.0	5	5.2	24	25.0	49	51.0	18	18.8
I can easily learn to use new technologies.	0	0.0	0	0.0	9	9.4	66	68.8	21	21.9
I can adapt to the use of new technologies that I consider important.	0	0.0	0	0.0	8	8.3	56	58.3	32	33.3
I have knowledge about various different technologies.	0	0.0	7	7.3	31	32.3	47	49.0	11	11.5
I possess the technical skills required to use Information and Communication Technologies (ICT) in learning and creating new things (presentations, digital stories, wikis, blogs, etc.).	2	2.1	6	6.3	15	15.6	53	55.2	20	20.8
I trust my research and evaluation skills for obtaining information from the Internet.	0	0.0	0	0.0	11	11.5	53	55.2	32	33.3
The potential use of mobile technologies (cell phones, PDAs, iPads, smartphones, etc.) is high in my learning process.	0	0.0	1	1.0	14	14.6	50	52.1	31	32.3
My teachers should use Information and Communication Technologies (ICT) more when teaching.	0	0.0	2	2.1	6	6.3	47	49.0	41	42.7
Information and Communication Technologies (ICT) allow me to collaborate better with my friends in project work and other learning activities.	0	0.0	1	1.0	11	11.5	60	62.5	24	25.0
My ICT skills are good.	0	0.0	0	0.0	14	14.6	59	61.5	23	24.0
I am knowledgeable about Internet-based topics (e.g., cyber security, plagiarism, research topics, etc.).	1	1.0	2	2.1	28	29.2	48	50.0	17	17.7

When looking at Table 2, prominent findings include that the majority of participants enjoy using information and communication technologies (%92.7) and find these technologies effective in their learning processes (%92.8). Additionally, participants mention that technology makes their learning process more engaging (%95.9) and motivating (%90.6). Moreover, participants express confidence in their ability to solve technical problems (%69.8) and their capacity to learn new technologies (%90.7). Students desire their teachers to use more technology in their lessons (%91.7). Finally, participants believe they can collaborate better with their friends using information and communication technologies (%87.5) and express confidence in their knowledge of topics related to these technologies (%83.3).

3.2. Findings Regarding the Second Research Question

Table 3 provides an overview of the outcomes pertaining to variations in digital literacy levels between Turkish Language and Literature instructors and Turkish Language educators, as derived from the independent samples *t*-test.

Table 3
Findings regarding the difference in digital literacy levels of Turkish and Turkish Language and Literature teachers

Factor	*Field*	*N*	*Mean*	*SD*	*df*	*t*	*p*
Attitude factor	Turkish	45	28.77	3.84	94	1.057	.293
	TLL	51	27.82	4.86			
Technical factor	Turkish	45	24.44	3.20	94	1.378	.171
	TLL	51	23.47	3.66			
Cognitive factor	Turkish	45	8.42	1.23	94	0.700	.486
	TLL	51	8.23	1.36			
Social factor	Turkish	45	8.00	1.34	94	1.624	.108
	TLL	51	7.50	1.57			
Total	Turkish	45	69.64	8.23	94	1.360	.177
	TLL	51	67.03	10.25			

As indicated in Table 3, an examination of the attitude factor reveals that Turkish Language instructors exhibit an average score of 28.77, accompanied by a standard deviation of 3.84, whereas Turkish Language and Literature educators manifest an average score of 27.82, with a standard deviation of 4.86. It is noteworthy that there exists no substantial disparity between these two groups in terms of this factor ($t(94) = 1.057$, $p = .293$). Turning attention to the technical factor, Turkish Language teachers showcase an average score of 24.44, alongside a standard deviation of 3.20. In contrast, Turkish Language and Literature teachers present an average score of 23.47, with a standard deviation of 3.66. Once again, it is discerned that there is no statistically significant distinction between the two groups concerning this factor ($t(94) = 1.378$, $p = .171$).

In the cognitive factor, Turkish Language instructors attain an average score of 8.42, complemented by a standard deviation of 1.23, while their counterparts in Turkish Language and Literature record an average score of 8.23, alongside a standard deviation of 1.36. It is important to note that there is no substantial difference observed between these groups with regard to this factor ($t(94) = 0.700$, $p = .486$). In the social factor, Turkish Language teachers accumulate an average score of 8.00, accompanied by a standard deviation of 1.34. Conversely, Turkish Language and Literature teachers register an average score of 7.50, with a standard deviation of 1.57. Once more, there exists no statistically significant discrepancy between the two groups pertaining to this factor ($t(94) = 1.624$, $p = .108$).

Lastly, when scrutinizing the total scores, Turkish Language teachers exhibit an average score of 69.64, along with a standard deviation of 8.23, while Turkish Language and Literature teachers showcase an average score of 67.03, complemented by a standard deviation of 10.25. It is imperative to underscore that no noteworthy distinction is discerned between the two groups in terms of this factor either ($t(94) = 1.360$, $p = .177$).

3.3. Findings Regarding the Third Research Question

The independent samples t-test results for the research question addressing the variation in the digital literacy levels of Turkish Language and Turkish Language and Literature teachers by gender are presented in Table 4.

Table 4
Findings regarding the difference in the levels of Turkish and Turkish Language and Literature teachers according to gender

Factor	*Gender*	*N*	*Mean*	*SD*	*df*	*t*	*p*
Attitude factor	Female	46	28.13	4.79	94	−0.297	.767
	Male	50	28.40	4.08			
Technical factor	Female	45	23.84	3.83	94	−0.214	.831
	Male	51	24.00	3.13			
Cognitive factor	Female	45	8.26	1.40	94	−0.446	.657
	Male	51	8.38	1.21			
Social factor	Female	45	7.58	1.62	94	−0.963	.338
	Male	51	7.88	1.34			
Total	Female	45	67.82	10.69	94	−0.432	.667
	Male	51	68.66	8.13			

As indicated in Table 4, when considering the attitude factor, it becomes evident that female teachers exhibit an average score of 28.13, accompanied by a standard deviation of 4.79, whereas male teachers demonstrate an average score of 28.40, with a standard deviation of 4.08. It is important to note that there exists no statistically significant difference between the genders concerning the attitude factor ($t(94) = -0.297$, $p = .767$). Turning attention to the technical factor, female teachers manifest an average score of 23.84, alongside a standard deviation of 3.83, while their male counterparts record an average score of 24.00, with a standard deviation of 3.13. Once again, it is discerned that there is no statistically significant distinction between the genders with respect to the technical factor ($t(94) = -0.214$, $p = .831$).

In the cognitive factor, female teachers attain an average score of 8.26, complemented by a standard deviation of 1.40, while male teachers achieve an average score of 8.38, with a standard deviation of 1.21. Importantly, there is no significant difference observed between the genders in relation to the cognitive factor ($t(94) = -0.446$, $p = .657$). Regarding the social factor, female teachers accumulate an average score of 7.58, accompanied by a standard deviation of 1.62, whereas male teachers exhibit an average score of 7.88, with a standard deviation of 1.34. Once more, there is no significant difference between genders concerning the social factor ($t(94) = -0.963$, $p = .338$).

Lastly, concerning total scores, female teachers showcase an average score of 67.82, complemented by a standard deviation of 10.69, while male teachers present an average score of 68.66, alongside a standard deviation of 8.13. It is imperative to underscore that no noteworthy distinction is discerned between the genders in terms of total scores ($t(94) = -0.432$, $p = .667$).

3.4. Findings Regarding the Fourth Research Question

The independent samples t-test results for the research question addressing the variation in digital literacy levels of Turkish Language and Literature teachers based on individual computer ownership are presented in Table 5.

Table 5
Findings regarding the difference in the levels of Turkish and Turkish Language and Literature teachers according to their individual computer ownership

Factor	*Individual Computer status*	*N*	*Mean*	*SD*	*df*	*t*	*p*
Attitude factor	Yes	70	28.97	3.42	94	2.628	.010*
	No	26	26.38	6.06			
Technical factor	Yes	70	24.35	2.96	94	2.024	.046*
	No	26	22.76	4.42			
Cognitive factor	Yes	70	8.42	1.16	94	1.310	.193
	No	26	8.03	1.61			
Social factor	Yes	70	8.02	1.19	94	3.277	.001*
	No	26	6.96	1.90			
Total	Yes	70	69.78	7.24	94	2.691	.008*
	No	26	64.15	12.92			

Note. $^{*}p < .05$

Based on the data presented in Table 5, concerning the attitude factor, it is observed that teachers who possess a computer exhibit an average score of 28.97, with a standard deviation of 3.42. In contrast, teachers who do not own a computer attain an average score of 26.38, with a standard deviation of 6.06. It is important to note that a statistically significant difference exists in the attitude factor between teachers who own a computer and those who do not ($t(94)=2.628$, $p = .010$). With regard to the technical factor, teachers who have computer ownership record an average score of 24.35, accompanied by a standard deviation of 2.96. Conversely, teachers without computer ownership demonstrate an average score of 22.76, with a standard deviation of 4.42. Similarly, a statistically significant difference is evident in the technical factor between teachers who own a computer and those who do not ($t(94)=2.024$, $p = .046$).

In the cognitive factor, teachers who possess a computer achieve an average score of 8.42, with a standard deviation of 1.16. Meanwhile, teachers who lack computer ownership acquire an average score of 8.03, alongside a standard deviation of 1.61. In this case, there is no statistically significant difference between the two groups in terms of the cognitive factor ($t(94)=1.310$, $p = .193$). Turning to the social factor, it is observed that teachers who own a computer manifest an average score of 8.02, with a standard deviation of 1.19. Conversely, teachers who do not own a computer present an average score of 6.96, accompanied by a standard deviation of 1.90. Notably, a statistically significant difference is identified in the social factor between teachers who own a computer and those who do not ($t(94)=3.277$, $p = .001$).

Lastly, concerning total scores, teachers who possess a computer showcase an average score of 69.78, complemented by a standard deviation of 7.24. Conversely, teachers who do not own a computer exhibit an average score of 64.15, with a standard deviation of 12.92. It is imperative to emphasize that a statistically significant difference is evident in the total scores between teachers who own a computer and those who do not ($t(94)=2.691$, $p = .008$).

3.5. Findings Regarding the Fifth Research Question

The independent samples *t*-test results for the research question examining the variation in digital literacy levels of Turkish Language and Literature teachers based on their social media membership status are presented in Table 6.

Table 6
Findings regarding the difference in the levels of Turkish and Turkish Language and Literature teachers according to their social media membership status

Factor	*Social media account*	*N*	*Mean*	*SD*	*df*	*t*	*p*
Attitude factor	Yes	62	28.80	3.90	94	1.618	.109
	No	34	27.29	5.14			
Technical factor	Yes	62	24.74	2.91	94	3.260	.002*
	No	34	22.44	3.92			
Cognitive factor	Yes	62	8.56	1.09	94	2.524	.013*
	No	34	7.88	1.53			
Social factor	Yes	62	8.11	1.18	94	3.511	.001*
	No	34	7.05	1.73			
Total	Yes	62	70.22	7.64	94	2.868	.005*
	No	34	64.67	11.23			

Note. $^{*}p < .05$

As indicated by Table 6, concerning the attitude factor, educators who maintain social media accounts exhibited an average score of 28.80, accompanied by a standard deviation of 3.90. Conversely, teachers devoid of social media accounts attained an average score of 27.29, with a standard deviation of 5.14. Importantly, there was no statistically significant difference in the attitude factor between teachers with and without social media accounts ($t(94)=1.618$, $p = .109$). For the technical factor, teachers who possess social media accounts recorded an average score of 24.74, boasting a standard deviation of 2.91. In contrast, teachers lacking social media accounts secured an average score of 22.44, along with a standard deviation of 3.92. Remarkably, a statistically significant difference was discerned in the technical factor between teachers with and without social media accounts ($t(94)=3.260$, $p = .002$).

In the cognitive factor, educators with social media accounts demonstrated an average score of 8.56, alongside a standard deviation of 1.09. Conversely, teachers without social media accounts presented an average score of 7.88, complemented by a standard deviation of 1.53. Notably, a statistically significant difference surfaced in the cognitive factor between teachers with and without social media accounts ($t(94)=2.524$, $p = .013$). Turning to the social factor, teachers who maintained social media accounts manifested an average score of 8.11, coupled with a standard deviation of 1.18. Conversely, educators devoid of social media accounts showcased an average score of 7.05, accompanied by a standard deviation of 1.73. It is worth highlighting that a statistically significant difference was identified in the social factor between teachers with and without social media accounts ($t(94)=3.511$, $p = .001$).

Finally, when considering total scores, teachers with social media accounts displayed an average score of 70.22, complemented by a standard deviation of 7.64. In contrast, teachers lacking social media accounts presented an average score of 64.67, with a standard deviation of 11.23. Notably, there was a statistically significant difference in total scores between teachers with and without social media accounts ($t(94)=2.868$, $p = .005$). Importantly, in all instances, the direction of the differences favored teachers with social media accounts.

3.6. Findings Regarding the Sixth Research Question

The findings related to the question of differences in digital literacy scores among Turkish Language and Literature teachers with different seniority levels are presented in Table 7.

Table 7
Findings regarding the difference between the scores of Turkish and Turkish Language and Literature teachers with different seniority on the digital literacy scale

Factor	*Groups*	*N*	*Mean*	*SD*	*F*	*p*	*Differences*
Attitude factor	0-2 y	11	27.54	2.50454	6.334	.000*	0-2>26 and over 2-5>26 and over 6-10>26 and over 11-15>26 and over 16-20>26 and over 21-25>26 and over
	2-5 y	24	28.87	2.99728			
	6-10 y	19	29.63	3.65469			
	11-15 y	20	29.50	4.35890			
	16-20 y	12	27.00	4.69042			
	21-25 y	7	27.57	5.19157			
	26 and over	3	16.00	3.46410			
	Total	96	28.28	4.41643			
Technical factor	0-2 y	11	25.3636	2.33550	6.302	.000*	0-2>26 and over 2-5>26 and over 6-10>26 and over 11-15>26 and over 16-20>26 and over 21-25>26 and over 0-2>21-25 6-10>21-25 11-15>21-25
	2-5 y	24	23.5417	3.12047			
	6-10 y	19	25.2105	2.80038			
	11-15 y	20	24.4500	3.54631			
	16-20 y	12	24.0833	2.31432			
	21-25 y	7	21.5714	3.35942			
	26 and over	3	15.0000	3.00000			
	Total	96	23.9271	3.47092			
Cognitive factor	0-2 y	11	8.6364	1.12006	4.055	.001*	0-2>26 and over 2-5>26 and over 6-10>26 and over 11-15>26 and over 16-20>26 and over 21-25>26 and over
	2-5 y	24	8.2917	1.16018			
	6-10 y	19	8.5263	1.21876			
	11-15 y	20	8.7500	1.01955			
	16-20 y	12	8.0833	1.16450			
	21-25 y	7	7.8571	1.77281			
	26 and over	3	5.3333	1.15470			
	Total	96	8.3229	1.30178			
Social factor	0-2 y	11	8.1818	.75076	7.360	0,000*	0-2>26 and over 2-5>26 and over 6-10>26 and over 11-15>26 and over 16-20>26 and over 21-25>26 and over 0-2>21-25 2-5>21-25
	2-5 y	24	7.9583	1.19707			
	6-10 y	19	8.0526	1.12909			
	11-15 y	20	7.9500	1.43178			
	16-20 y	12	7.6667	1.43548			
	21-25 y	7	6.8571	1.57359			
	26 and over	3	3.3333	1.15470			
	Total	96	7.7396	1.48852			
Total	0-2 y	11	4.94148	1.48991	8.000	.000*	0-2>26 and over 2-5>26 and over 6-10>26 and over 11-15>26 and over 16-20>26 and over 21-25>26 and over 6-10>21-25
	2-5 y	24	7.65942	1.56347			
	6-10 y	19	7.51529	1.72412			
	11-15 y	20	8.99868	2.01217			
	16-20 y	12	6.82020	1.96882			
	21-25 y	7	11.00649	4.16006			
	26 and over	3	6.02771	3.48010			
	Total	96	9.40576	0.95997			

Note. $^{*}p < .05$

The statistically significant differences in the scores obtained from the digital literacy scale among Turkish and Turkish Language and Literature teachers with different seniority levels, as examined in Table 7, are as follows: In the Attitude factor, there is a difference against teachers with 26 and over seniority compared to all groups. In the Technical factor, there is a difference against teachers with 26 and over seniority compared to all groups. Additionally, there is a significant difference against teachers with 21-25 seniority compared to those with 0-2, 6-10, and 11-15 years of seniority. In the Cognitive factor, there is a difference against teachers with 26 and over seniority compared to all groups. In the Social factor, there is a difference against teachers with 26 and over seniority compared to all groups. Furthermore, there is a significant difference in

favor of teachers with 0-2 and 2-5 years of seniority compared to those with 21-25 years of seniority. Finally, concerning the total scores, there is a difference against teachers with 26 and over seniority compared to all groups. However, there is a significant difference in favor of teachers with 6-10 years of seniority compared to those with 21-25 years of seniority.

3.7. Findings Regarding the Seventh Research Question

The findings related to the differences in the average scores of digital literacy levels among Turkish and Turkish Language and Literature teachers with different computer usage durations, as investigated in Table 8.

Table 8
Findings regarding the difference between the scores obtained from the digital literacy scale by Turkish and Turkish Language and Literature teachers with different computer usage periods.

Factor	*Groups*	*N*	*Mean*	*SD*	*F*	*p*	*Differences*
Attitude factor	less than 1 hour	26	26.6923	5.21359	1.000	.423	
	1-2 hours	38	28.8684	3.32209			
	2-3 hours	15	28.6667	4.53032			
	3-4 hours	6	29.8333	5.03653			
	4-5 hours	4	29.0000	4.54606			
	5 and above	7	28.2857	5.64843			
	Total	96	28.2708	4.41643			
Technical factor	less than 1 hour	26	22.3462	4.03923	2.653	.028*	2-3 between hours> less than 1 hour 3-4 between hours> less than 1 hour 5 hours and above > less than 1 hour 3-4 between hours> 1-2 between hours
	1-2 hours	38	23.7368	3.01065			
	2-3 hours	15	25.2000	2.78260			
	3-4 hours	6	26.3333	3.72380			
	4-5 hours	4	24.7500	3.59398			
	5 and above	7	25.5714	2.50713			
	Total	96	23.9271	3.47092			
Cognitive factor	less than 1 hour	26	7.6154	1.60192	2.640	.028*	1-2 hours> less than 1 hour 2-3 hours> less than 1 hour 3-4 hours> less than 1 hour 5 hours and above > less than 1 hour
	1-2 hours	38	8.5000	1.00673			
	2-3 hours	15	8.4667	1.06010			
	3-4 hours	6	9.1667	.98319			
	4-5 hours	4	8.7500	1.25831			
	5 and above	7	8.7143	1.49603			
	Total	96	8.3229	1.30178			
Social factor	less than 1 hour	26	1.23161	.23960	3.281	.090	
	1-2 hours	38	1.30324	.21141			
	2-3 hours	15	1.24595	.32170			
	3-4 hours	6	1.22474	.50000			
	4-5 hours	4	1.29099	.64550			
	5 and above	7	1.00000	.37796			
	Total	96	1.48852	.15192			
Total	less than 1 hour	26	8.61299	2.27749	2.205	.061	
	1-2 hours	38	9.23985	1.17446			
	2-3 hours	15	8.20163	2.11765			
	3-4 hours	6	9.86745	4.02837			
	4-5 hours	4	10.03328	5.01664			
	5 and above	7	8.61892	3.25764			
	Total	96	9.40576	.95997			

Note. $^{*}p < .05$

Referring to Table 8, when considering the attitude factor, it's noteworthy that there were no substantial differences observed in the scores concerning computer usage duration ($p > .05$). However, in the technical factor, a significant variance was evident in the scores relative to

computer usage duration (p <.05). This significant difference pointed to an advantage for educators who utilized the computer for more extended periods, particularly those who spent 2-3 hours, 3-4 hours, or 5 hours or more on the computer. Additionally, there was a discernible contrast favoring teachers with more extended computer usage durations, particularly those who allocated 3-4 hours, when compared to their counterparts who spent 1-2 hours on the computer. Shifting the focus to the cognitive factor, the scores exhibited a significant difference based on computer usage duration (p <.05). Much like the technical factor, this variation favored teachers with longer computer usage durations, specifically those who dedicated more time, such as 1-2 hours, 2-3 hours, 3-4 hours, or 5 hours or more.

On the other hand, within the social factor, no substantial differences surfaced in the scores relative to computer usage duration (p >.05). This implies that the extent of computer use did not significantly impact the social aspect of digital literacy among the teachers. Lastly, when looking at the total scores, there was no statistically significant difference associated with computer usage duration (p >.05). This indicates that, in terms of total digital literacy scores, computer usage duration did not play a significant role in differentiation among the participants.

4. Discussion

This study delved into the realm of digital literacy among Turkish language and Turkish Language and Literature teachers, dissecting it through various critical lenses. The findings paint a picture of educators who predominantly embrace information and communication technologies, recognizing their effectiveness in facilitating the learning process. These technologies, as reported by participants, inject an element of intrigue and motivation into the learning experience. Furthermore, the study underscores the teachers' prowess in troubleshooting technical issues and their confidence in navigating new technological terrain, often leveraging collaborative efforts with their peers to enhance their command of information and communication technologies.

Interestingly, the research unearths that there exists no substantial disparity in digital literacy levels between Turkish language teachers and their counterparts in Turkish Language and Literature. This intriguing result may signify a degree of parity in digital literacy skills within the language and literature domain. Nevertheless, future inquiries might explore the digital literacy landscape among educators in other disciplines to draw more comprehensive conclusions. Intriguingly, the gender factor does not seem to exert a notable influence on digital literacy, aligning with previous studies. Ulaş and Ozan (2010) reported akin findings, indicating no significant gender-based disparities in teachers' utilization of internet-based technology. Aksoy et al. (2021) also concurred, asserting that gender plays a negligible role in shaping digital literacy among classroom teachers. Furthermore, investigations into the digital literacy of aspiring educators have yielded consistent results, showcasing the absence of significant gender distinctions (Sulak, 2019; Yazıcıoğlu et al., 2020; Yontar, 2019). Evidently, gender is not a pivotal determinant of digital literacy levels among teachers.

Moreover, except for the cognitive factor, teachers equipped with personal computers exhibit markedly higher digital literacy scores compared to their counterparts devoid of such resources. Individual computer ownership thus emerges as a pivotal factor in the realm of digital literacy, underlining its significance in this context.

Another result obtained in the research is that teachers with social media accounts have an advantage in terms of technical skills, cognitive abilities, and total scores in digital literacy. These findings indicate that social media can positively impact teachers' digital literacy skills. Social media can provide opportunities for knowledge sharing and learning among teachers.

According to the research results, teachers with higher seniority levels have significantly lower digital literacy levels compared to those with lower seniority levels. This suggests that seniority, and therefore age, can be a limiting factor in digital literacy. Aksoy et al. (2021) also found that as the age of classroom teachers increased, their digital literacy levels decreased. It is observed that adults who have encountered technology in their later years and have been exposed to technology face difficulties in adapting to technology. In contrast, children and young people born into the

digital age adapt to technology very quickly (Bilgin et al., 2012; Karakuş Yılmaz, 2020). Sur (2012) also found that teachers with 21-25 years of seniority had lower digital literacy levels compared to teachers with other levels of seniority.

In terms of the technical and cognitive factors, there was a significant relationship between computer usage duration and digital literacy scores. Especially, it was observed that teachers who use the computer for longer periods have higher levels of technical skills. This suggests that computer usage duration can help improve digital literacy skills. This result indicates that if teachers want to enhance their technical skills, using the computer more frequently may be beneficial.

5. Results

The results obtained in the research can be presented under the following headings:

- Turkish language and Turkish Language and Literature teachers are observed to enjoy using information and communication technologies and find them effective in their learning processes.
- Teachers' ability to solve technical problems and their confidence in learning new technologies are evident.
- It was concluded that teachers can use information and communication technologies better in collaboration with their peers.
- There was no significant difference in digital literacy levels among Turkish language and Turkish Language and Literature teachers.
- Gender does not have a significant impact on digital literacy. Male and female teachers have similar abilities in digital literacy.
- Individual computer ownership has a positive impact on digital literacy. Teachers who own computers have an advantage in digital literacy skills.
- Teachers with social media accounts have an advantage in terms of technical skills, cognitive abilities, and total scores in digital literacy. Social media can promote knowledge sharing among teachers and enhance digital literacy skills.
- As seniority levels increase, teachers' digital literacy levels decrease. This indicates that seniority may be a limiting factor in digital literacy.
- There is a positive relationship between computer usage duration and technical skills and cognitive abilities. More computer usage can enhance technical skills.

6. Recommendations

For Teachers:

- Effective Use of Technology in Education: Teachers can engage students and motivate them by effectively using technology in the educational process. They should actively use digital tools for course materials and interactive learning.
- Increase Computer Usage: If teachers want to improve their digital literacy skills, they should use their personal computers more frequently and work on self-improvement by using technological tools more often.
- Active Social Media Participation: Teachers should actively use social media platforms to share knowledge with colleagues and follow online learning opportunities to enhance their digital literacy skills.

For Teacher Educators:

- Integration of Technology in Teacher Education: Teacher education programs should provide more opportunities for teacher candidates to encourage technology integration. Digital literacy skills should be an essential part of teacher training.

For Researchers:

- Research in Other Disciplines: Teacher abilities in digital literacy should be further investigated through comparative studies among teachers in different disciplines.

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