Tabaran Institute of Higher Education
Journal of Research in Techno-based Language Education
Vol. 5, No. 1; 2025, March

ISSN 2821-0301
https://www.jrtle.ir

On the Relationship between Iranian EFL Teachers' Computer, Information and Multimedia Literacy and their Online Teaching Satisfaction

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ARTICLE INFO

Article History:
Received: August 2024
Accepted: November 2024

KEYWORDS
Computer Literacy
Information Literacy
Online Teaching
Teaching Satisfaction
Multimedia Literacy

ABSTRACT

Teachers' technological literacy plays an important role in their teaching process. Due to the lack of research regarding the relationship between EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction in Iranian educational settings, the current study was done to assess the relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. Correlation design was used to do the current study. To this end, a group of 322 EFL teachers teaching in different language institutes in Mashhad, Iran was selected to participate in the study based on the convenience sampling. Then, the computer, information, multimedia literacy questionnaire (Soleimani et al., 2018) and the teachers' online teaching satisfaction questionnaire (Khodarahmi et al., 2023) were distributed among the participants of the study to gather the required data. The results of Pearson correlation showed a significant relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. Furthermore, the results of multiple regression showed that all of the components of teachers' computer, information and multimedia literacy significantly predicted their online teaching satisfaction. The findings suggest that policymakers and educational leaders should recognize the integral role of digital literacy such as information literacy and multimedia literacy in teachers' online satisfaction and students' success.

1. Introduction

The rise of Computer-Assisted Language Learning (CALL) in the 1950s and 1960s, combined with the proliferation of microcomputers in the 1980s and the advent of multimedia and the internet in the 20th century, has led to an increased use of technological tools in language instruction (Soleimani et al., 2018). These advancements, coupled with the recognition of the benefits that technology can offer in language learning, have provided teachers with new opportunities to enhance language instruction through the use of authentic materials, multimedia, and online communication. Teachers can design student-centered materials that consider individual differences by utilizing the internet (Chapelle, 2001). Furthermore, technology offers significant opportunities for both teachers and learners to actively engage in creating educational products (Shin & Son, 2007). The use of e-tools for teaching language

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Cite this paper as: Kazemi, S. & Yeganehdoost, H. (2025). On the relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. *Journal of Research in Techno-based Language Education, 5*(1), 1-16. https://doi.org/10.22034/jrtle.2024.474988.1057

skills has been shown to improve the teaching and learning of various skills, such as listening, reading, and writing (Erben et al., 2009). Moreover, incorporating technology in EFL classrooms has positively impacted discovery learning, learner autonomy, and learner-centeredness, all while facilitating instruction (Erben et al., 2009). Computers and the internet empower EFL teachers to design tasks and activities for English classes (Shetzer & Warschauer, 2000). These ongoing technological developments necessitate that both teachers and students in the EFL field possess literacy in these areas (Soleimani et al., 2018). Consequently, the traditional concept of literacy has expanded to include computer literacy, information literacy, and multimedia literacy (Bitter & Davis, 1985).

Accordingly, computer literacy has been defined in various ways depending on the context, as there is no universally accepted definition. However, it generally refers to the ability to use computers effectively for tasks such as creating, communicating, and collaborating within a literate community (Son et al., 2011). Williams (2003) defines computer literacy as the competence in using common computer applications, such as word processing and email. Today, computer literacy is considered a crucial component of undergraduate education (Ozsevgec, 2011). Zhang and Barber (2008) highlighted the importance of computer literacy in language learning and teaching, emphasizing the need to leverage the knowledge of computer scientists to enhance the use of technology in language instruction. Scholars argue that society requires teachers with multiple skills, capable of critical thinking, problem-solving, and adapting to new challenges, to be more effective for their learners (Bawden, 2001).

Furthermore, information literacy, another form of literacy, involves recognizing the need for information and effectively identifying, locating, evaluating, and using it to address a problem (Bawden, 2001). An information-literate individual is able to discern the need for information and competently locate, evaluate, analyze, and use it (Kurbanoğlu et al., 2006). The internet has vastly expanded opportunities for gathering, producing, and sharing information (Thorne & Black, 2008), highlighting the importance of information literacy in academic contexts (Probert, 2009). Fister (2009) emphasizes that the ability to find, assess, and use information is an essential intellectual skill for both students and teachers. Bruce (2002) notes that the complexity and constant evolution of the information environment necessitate learners and teachers develop the skills to navigate these challenges. Thus, teachers must continuously update their skills to integrate new technologies into language teaching. The growing use of electronic resources and the internet as a primary source of information further underscores the importance of teachers' commitment to information literacy instruction (Bawden, 2001).

Additionally, technology has expanded the ways in which people communicate, leading to the emergence of a new form of literacy known as multimedia literacy. Mayer (2009) defines multimedia literacy as the ability to understand information presented through various media forms, including audio, images, and videos. Multimedia literacy involves both the creation and consumption of multimedia documents by students and teachers (Unić et al., 2013). According to Ware (2008), multimedia literacy is more engaging for teachers and students than traditional print-based literacy, offering alternative visual and verbal methods for creating texts. Language teachers aiming to facilitate learning should prioritize multimedia literacy. Educators must consider learners' needs and capacities when determining the elements and levels of multimedia literacy (Zamani, 2010).

Based on the aforementioned studies, literacy in its expanded definition- including computer literacy, information literacy, and multimedia literacy- has proven to be instrumental in the process of language teaching and learning. Teachers play a crucial role in utilizing their multidimensional literacy to enhance language instruction and pass these skills on to their students. Although numerous studies (Rilling et al., 2005; Son, 2004) have explored the computer literacy of language teachers, there has been limited research in Iran.

Moreover, a high-quality education system is fundamentally dependent on qualified staff, particularly teachers (Pourbahram & Sadeghi, 2020; Rinantanti et al., 2019). Teachers are the cornerstone of a successful education system. As Zahoor (2011) points out, the establishment of a quality education system or the implementation of educational reforms is unattainable without well-trained, motivated, committed, and satisfied teachers. It is crucial that teachers approach their responsibilities with dedication and strive to achieve educational objectives (Rezai et al., 2021). Teachers' job satisfaction is a strong predictor of their job performance and productivity (Khokhar et al., 2021). Consequently, the ability of schools to achieve educational goals is closely linked to teachers'

job satisfaction, which has garnered significant attention from education officials over the past decades (Nguyen & Ngo, 2017).

In Iran, the modern education system aims to meet the current and future needs of individuals, society, and the government by developing well-rounded citizens (Davari & Aghagolzadeh, 2015). These individuals are expected to adapt to social, political, economic, and cultural changes, engage in self-education, self-improvement, and productive employment. The realization of these objectives depends on having competent teachers. Ensuring the achievement of these goals requires teachers who are knowledgeable, skilled, motivated, and satisfied with their work. Without competent teachers, quality education cannot occur, as only qualified teachers can facilitate student learning through the design and implementation of effective teaching strategies. The quality of an education system is closely tied to the presence of professionally competent, committed, motivated, and satisfied teachers (Darling-Hammond, 2000). A competent teacher can achieve educational objectives if they are satisfied with their work conditions (Afshar & Doosti, 2016). Therefore, job satisfaction is critical for teachers in all classes especially online ones.

While previous studies have examined various factors influencing teachers' online teaching satisfaction, none have directly explored the relationship between EFL teachers' computer, information, and multimedia literacy—key literacies in the 21st century (Soleimani et al., 2018)—and their online teaching satisfaction. This study aims to investigate the relationship between Iranian EFL teachers' proficiency in these literacies and their satisfaction with online teaching. The main research questions of this study were:

1. Is there any significant relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction?

2. Can the components of EFL teachers' computer, information and multimedia literacy predict the Iranian EFL teachers' online teaching satisfaction?

2. Review of Literature

2.1. Computer Literacy

Computer literacy has been defined in various ways depending on the context, as there is no universally accepted definition. However, it generally refers to the ability to use computers effectively for tasks such as creating, communicating, and collaborating within a literate community (Son et al., 2011). Williams (2003) defines computer literacy as the competence in using common computer applications, such as word processing and email. Today, computer literacy is considered a crucial component of undergraduate education (Ozsevgec, 2011). Zhang and Barber (2008) highlighted the importance of computer literacy in language learning and teaching, emphasizing the need to leverage the knowledge of computer scientists to enhance the use of technology in language instruction. Scholars argue that society requires teachers with multiple skills, capable of critical thinking, problem-solving, and adapting to new challenges, to be more effective for their learners (Bawden, 2001).

Computer literacy often refers to proficiency in basic computer programs like word processing and email. In the face of fast change, literacy is insufficient as a long-term objective. As technology advances, outdated skills become obsolete without a clear path to new ones. Adapting to technological developments requires a solid foundation of knowledge and the ability to master new skills autonomously after formal schooling (Williams, 2003). As explained by Son (2004), computer literacy refers to the capacity to utilize computers effectively for invention, communication, and cooperation in a literate society. The committee (NRC, 1999) used the term "fluency" instead of "literacy" to refer to a higher degree of proficiency due to the need for a more in-depth understanding than just "computer literacy."

As the use of computers becomes more widely available and advanced, the increased usage of electronic materials has broadened the definition of 'literacy' and given rise to new literacies such as computer literacy, electronic literacy, and information literacy (Son, 2004). The definition of computer literacy has expanded (Son et al., 2011), and developing and improving computer skills is a crucial aspect of teacher education. Computer literacy in language teacher education refers to the confident and proficient use of generic computer applications, language-specific software, and Internet resources. The course covers technical awareness, terminology, computer components, data and program ideas, computing methods, multimedia use, resource evaluation, and communication skills. It is clear that

teachers' technology use and expertise are inextricably linked to their level of trust (Atkins & Vasu, 2000), which influences their attitudes towards technology integration.

To successfully incorporate technology in the classroom, instructors must have knowledge and abilities in online settings, as well as technical proficiency in using computer software for education (Williams, 2003). Robb (2006) emphasizes the necessity for school administrators to support teachers' self-directed technology development by providing necessary tools and opportunities. Park and Son (2009) found that language teachers who feel comfortable using computers are more likely to adopt CALL (Computer Assisted language learning) effectively. Bodaghi and Ghapanchi (2023) aimed at investigating the relationship between Iranian intermediate EFL learners' digital literacy and their self-directed learning. For the purpose of the study, 210 male and female Iranian EFL learners from Mashhad English language institutes took part in the study through using convenience sampling method. The results of Pearson Correlation analyses revealed that there was a positive relationship between the Iranian intermediate EFL learners' digital literacy and their self-directed learning. Kessler and Plankans (2008) found that language teachers who are contextually confident are more likely to use CALL effectively. Enhancing language, the trust of instructors and competency with utilizing CALL in their context is crucial in CALL teacher education. This aligns with the demand for technology-proficient language teachers and the need for teachers to be proficient in various technological tools for job opportunities (Son et al., 2011).

2.2. Information Literacy

Today's fast-paced society necessitates swift response from the education system, which is responsible for developing highly competent experts across many fields. The educational system plays the primary role in preparing individuals for their professional path. Teachers have a significant role in societal development. As students go through their education, they risk acquiring outdated professional competencies. Finding a solution to this predicament is challenging. Future teachers should be educated to strengthen their professional thinking, awareness, and abilities (Nadolska & Konovalenko, 2020). As defined by Sundin (2008), information literacy is frequently characterized as the capacity to seek out, select, critically analyze, and use information to solve issues in a variety of circumstances, such as autonomous project work in school. Understanding how to seek, assess, and apply information is crucial for education at all levels. Bawden (2001) defines information literacy as the ability to recognize the need for information, locate it, evaluate it, and successfully use it to solve a problem.

The rise of computer-assisted language learning (CALL) in the 1950s and 1960s, combined with the proliferation of microcomputers in the 1980s and the advent of multimedia and the internet in the 20th century, has led to an increased use of technological tools in language instruction (Soleimani et al., 2018). These advancements, coupled with the recognition of the benefits that technology can offer in language learning, have provided teachers with new opportunities to enhance language instruction through the use of authentic materials, multimedia, and online communication. Teachers can design student-centered materials that consider individual differences by utilizing the internet (Chapelle, 2001). Furthermore, technology offers significant opportunities for both teachers and learners to actively engage in creating educational products (Shin & Son, 2007). The use of e-tools for teaching language skills has been shown to improve the teaching and learning of various skills, such as listening, reading, and writing (Erben et al., 2009). Moreover, incorporating technology in EFL classrooms has positively impacted discovery learning, learner autonomy, and learner-centeredness, all while facilitating instruction (Erben et al., 2009). Computers and the internet empower EFL teachers to design tasks and activities for English classes (Shetzer & Warschauer, 2000). These ongoing technological developments necessitate that both teachers and students in the EFL field possess literacy in these areas (Soleimani et al., 2018). Consequently, the traditional concept of literacy has expanded to include computer literacy, information literacy, and multimedia literacy (Bitter & Davis, 1985).

Information literacy involves recognizing the need for information and effectively identifying, locating, evaluating, and using it to address a problem (Bawden, 2001). An information-literate individual is able to discern the need for information and competently locate, evaluate, analyze, and use it (Kurbanoğlu et al., 2006). The internet has vastly expanded opportunities for gathering, producing, and sharing information (Thorne & Black, 2008), highlighting the importance of information literacy in academic contexts (Probert, 2009). Fister (2009) emphasizes that the ability to find, assess, and use

information is an essential intellectual skill for both students and teachers. Bruce (2002) notes that the complexity and constant evolution of the information environment necessitate learners and teachers develop the skills to navigate these challenges. Thus, teachers must continuously update their skills to integrate new technologies into language teaching. The growing use of electronic resources and the internet as a primary source of information further underscores the importance of teachers' commitment to information literacy instruction (Bawden, 2001).

According to Bawden (2001), the concept of information literacy was likely first introduced by Paul Zurkowski in 1974. Zurkowski viewed information literacy as an outcome of the transition from traditional library practices to more innovative information services in the private sector, alongside the associated policy challenges. He associated information literacy with the effective use of information in professional environments, particularly in problem-solving contexts. Information literates, as defined by Zurkowski, are individuals who have been trained to use information resources within the workplace, employing a wide range of tools and primary sources to develop data-driven solutions to problems (Bawden, 2001).

Burchinall (1976) similarly emphasized the role of information literacy in problem-solving, noting that being information literate involves acquiring a new set of skills, including the ability to quickly and efficiently locate and utilize information for decision-making and problem resolution. Early on, the concept of information literacy was extended beyond workplace problem-solving to include broader societal responsibilities, such as fostering participatory citizenship. Owens (1976) argued that information literacy should be developed to ensure the survival of democratic institutions. Expanding on this, Taylor (1979) brought the term into the realm of library science, defining information literacy as involving the acquisition of relevant facts and information, knowledge of various information resources, continuous information-seeking processes, and strategies for acquiring information.

Later, Doyle (1994) offered a more concise definition, describing information literacy as the ability to access, evaluate, and use information from diverse sources. Another early interpretation by Hamelink (1976, as cited in Bawden, 2001) focused on the need for individuals to be liberated from the manipulative effects of the media, which he believed could be countered by creating independent news networks free from political or economic biases. By 1997, Snavely and Cooper noted that there was significant and widespread disagreement over the definition of information literacy.

True information literacy, as Taylor (1986) suggested, involves integrating a broad range of knowledge and skills essential for functioning effectively in an information-rich technological society. McClure (1994) expanded on this by describing information literacy as involving the ability to work with information in various formats, both print and digital, and positioning it at the intersection of multiple literacies—traditional, computer, media, and network literacies—within a broader set of problem-solving skills. Tuckett (1989) conceptualized information literacy as a hierarchical skill set, ranging from basic information skills with a single tool, to complex integrated abilities that involve using multiple information networks and critically evaluating and repackaging information.

As information literacy becomes more integral to academic libraries, it is increasingly important for educational programs, particularly those delivered online, to reflect this evolution (Sundin, 2008). Information literacy, alongside online security, is a critical 21st-century skill necessary for effective teaching and student learning across all levels and types of education, whether formal or informal. Nadolska and Konovalenko (2020) argue that information and communication technology can accelerate development, bridge the digital divide, and create knowledge-based societies. An information-literate person not only recognizes the need for information but also possesses the skills to seek, evaluate, analyze, and use it effectively.

The vast amount of information available on the internet underscores the importance of information literacy in academic settings (Probert, 2009). However, as Korobili et al. (2011) observed, while educators acknowledge the importance of information literacy, they often encounter obstacles in promoting it.Their study of 500 high school teachers in Greece revealed that teachers rarely used electronic resources and were not adequately prepared to help students develop information literacy skills. The researchers recommended that teachers participate in information literacy training to improve their competencies. Similarly, Probert (2009) found in a study of three New Zealand schools that although some teachers understood information literacy, they struggled to effectively impart the necessary strategies and skills to students.

2.3. Multimedia Literacy

Instructional media play a crucial role in modern education. The media's quick evolution creates new opportunities for education and upbringing. Textual media, including as textbooks, workbooks, and tests, served as the foundation for 20th-century education. Using written or spoken presentations to provide instructional knowledge can demotivate pupils and make it harder to capture and retain their attention (Unić et al., 2013). They also mention that combining multiple instructional media, such as text, sound, video, and images, can enhance students' learning experience and foster associations between educational content representations. Therefore, it is a priority for all educational institutions to introduce and employ a range of instructional media in the educational setting as a means for learning, class enrichment, and student progress.

Literacy traditionally pertains to the essential skills of reading, writing, and numeracy, necessary for applying knowledge acquired from printed materials. It refers to basic, alphabetic skills that were dominant during the Gutenberg era, where knowledge was produced and disseminated through analog media (Špiranec & Banek Zorica, 2008, as cited in Preradović et al., 2014). In contemporary society, however, information is consumed through various media, and literacy now encompasses multiple environments. Saunders (2011) broadly defines literacy as the set of skills required to acquire knowledge and function within society. Educators today recognize the importance of adapting to evolving media technologies and resources beyond the traditional classroom to better serve 21st-century learners.

The concept of multimedia literacy has emerged due to the widespread consumption of information through mass media, such as television and the internet. Multimedia literacy not only involves an understanding of general mass media but also plays a crucial role in education (Unić et al., 2013). Preradović et al. (2014) define multimedia literacy as "a set of skills enabling individuals to effectively find, interpret, use, evaluate, and even create multimedia. It encompasses abilities needed to process and exploit all components of multimedia: text, sound, image, animation, video, and interactivity" (Preradović et al., 2014, p. 97). This understanding of multimedia literacy is vital for educating a new generation of learners who process information differently. It is important to distinguish multimedia literacy from media literacy, which pertains to the use of mass media rather than the information it conveys (Lemke, 2013).

Bawden (2001) categorizes multimedia literacy under the broader term of digital literacy, which includes various literacies such as networking literacy, internet literacy, and hyper-literacy. Digital literacy primarily refers to the understanding of information on the internet. Gilster (1997) describes digital literacy as the ability to interpret and utilize information from various sources, in multiple formats, using computers as storage media and the internet as a platform for information dissemination and publication. Digital literacy encompasses the use of information online and digital materials, emphasizing the ability to manage text, images, and audiovisual content in nonlinear, interactive formats like hypertext. In this context, digital literacy closely aligns with multimedia literacy (Hall et al., 2014).

Preradović et al. (2014) suggest that, regardless of how literacy is defined in the literature, it generally represents the ability to read and write, comprehend information, and communicate ideas both abstractly and concretely, often assuming text as the primary communication medium. Like writing, multimedia enables the formation of concepts, abstraction, and comparison, but it also engages more senses and emphasizes interactivity. Unlike written content, which is composed and read, multimedia is developed, constructed, researched, and maintained (Hall et al., 2014). The production of multimedia typically requires collaboration and teamwork. The integration of text, graphics, music, and animation in a multimedia document creates a unique language that can be effectively utilized in education and instruction. Multimedia literacy aims to help users develop a critical awareness of the characteristics of multimedia, the techniques used in multimedia, and their impact on the end user (Unić et al., 2013).

In a study by Soleimani et al. (2018), the researchers investigated computer, information, and multimedia literacy among 255 Iranian EFL teachers. To collect the necessary data, they developed and validated the CIM-LQ, a five-point Likert scale questionnaire with three sections designed to assess participants' responses. The data were analyzed using SPSS, and the findings revealed that the EFL teachers' levels of multimedia and information literacy ranged from low to moderate. This outcome highlights the need for enhancing teacher training programs and preparing educators to effectively implement technology in real language teaching contexts. Consequently, as emphasized, it is crucial

that teachers receive appropriate training and preparation to effectively integrate modern technology into their teaching practices.

2.4. Teaching Satisfaction

Job satisfaction of educators is a key aspect of educational research, since it helps both instructors and students. Teachers who are content with their tasks and responsibilities are more committed to their organization, less likely to quit, and have a beneficial impact on students' educational attainment. Based on Locke's (1976, as mentioned in Demirtas, 2010) definition, job satisfaction is a good emotional state that stems from an individual's appreciation for their job or experience. Locke's definition of job satisfaction is widely recognized and captures the essential components of the concept. Job satisfaction encompasses all aspects of the job and work environment that employees find rewarding, fulfilling, or frustrating (Demirtas, 2010). Blegan (1993) determined 13 indicators of satisfaction, including "personal attributes like age, education, years of experience, and locus of control, as well as organizational variables like supervisor communication, commitment, stress, autonomy, recognition, routinization, peer communication, fairness, and professionalism (Blegan, 1993, p.37)". He also states that job satisfaction encompasses several factors such as satisfaction with supervisors, work, and compensation, prospects for promotion, colleagues, and customers.

Locke (1976, as cited in Demirtas, 2010) defines evaluating teaching satisfaction as a cognitive and judgmental process. Measuring teachers' emotional states alone cannot adequately assess their happiness with instruction. Chamberlain et al. (2016) characterized teaching satisfaction as a mix of teachers' their own assessments of task accomplishment, sentiments, as well as principles associated with the teaching process. According to Hongying (2007), teaching, management, and quality of education are all directly related to satisfaction. Instructor satisfaction was defined as teachers' general attitude and perspectives towards their working environment and profession. Teaching satisfaction is strongly connected to teacher well-being, professional retention, school cohesiveness, and student education quality (Heinrich et al., 2019).

Research (Bartosiewicz et al., 2022) shows that improving teacher job satisfaction is crucial for improving student learning outcomes, increasing work commitment, and reducing the risk of quitting the profession. According to Wong (2010), a teacher's job satisfaction depends on meeting the demands of their workplace. Career satisfaction encompasses employees' psychological and physical well-being, as well as their subjective perception of their job environment. Employee happiness with work is measured across five dimensions: job, management, remuneration, advancement, and work companions. Dissatisfaction or a negative feeling can lead to disappointing job outcomes (Van den Branden, 2016). In addition, Pham and Nghiem (2022) conducted a study to identify significant predictors of teacher satisfaction and their live online teaching experience during the coronavirus pandemic in Vietnam. The study used a mixed-methods approach with exploratory factor analysis, multiple regression techniques, and thematic analytical strategies to analyze survey data from 206 Vietnamese university lecturers. The study results indicated that online interaction, support from the institution, technology-related issues, and students' online efficacy were the key factors affecting lecturer satisfaction. In addition, the study results offer practical implications for educational managers in their long-term investment in online education in a developing country context. However, limited studies have been done regarding the relationship between teachers' computer, information and multimedia literacy and their online teaching satisfaction in Iranian educational settings. To fill the gap, the current study was done to assess the relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction.

3. Method

3.1. Design

This study employed a correlational design using a quantitative approach. The choice of a correlational design was driven by the primary objective of examining the relationship between two variables. Specifically, the research aimed to explore any significant association between the independent variables 'teachers' computer, information, and multimedia literacy and their satisfaction with online teaching.'

3.2. Participants and Settings

A sample of 322 EFL teachers from various language institutes in Mashhad, Iran, was selected for the study through convenience sampling. Since convenience sampling can ensure the easy accessibility of the participants, it was decided to be employed in the present research. The total population of EFL teachers in private language institutes was estimated at approximately 2,000, considering there are around 400 institutes in Mashhad, each employing about five teachers. Based on Krejcie and Morgan's table (1970), a sample size of 322 was determined to be appropriate, with a 95% confidence level and a 0.05 margin of error. The participants included both male and female teachers with diverse academic qualifications (BA, MA, and PhD) and varying teaching experiences (ranging from 5 to 20 years), as well as ages (ranging from 20 to 50 years). All participants were native Persian speakers and had experience teaching in online classes.

3.3. Instrumentation

Two different questionnaires were employed in this quantitative study to collect the required data. These data collection tools are as follows.

3.3.1. Computer, Information and Multimedia Literacy Questionnaire. To meet the requirements of the present study, the Computer, Information, and Multimedia Literacy Questionnaire (CIM-LQ for EFL Teachers) validated by Soleimani et al. (2018) was used. The questionnaire included 47 items with three subscales namely computer literacy with 21 items (items 1- 21), information literacy with 17 items (items 22- 38) and multimedia literacy with 9 items (items 39- 47). The questionnaire followed the five- point Likert scale ranging from "never or almost never true of me" =1 to "always or almost always true of me" =5. The reliability of the questionnaire was reported to be 0.88 based on Cronbach's Alpha. The respondents had approximately 20 minutes to fill out the questionnaire.

3.3.2. Teachers' Online Teaching Satisfaction Questionnaire. The second questionnaire used in the study was "questionnaire of satisfaction with online teaching of professors" questionnaire validated by Khodarahmi et al. (2023). The questionnaire contained 30 items measuring three dimensions namely satisfaction with the organization with 10 items (items 1- 10), student satisfaction with 10 items (items 11- 20) and self- satisfaction with 10 items (items 21- 30). The questionnaire followed the five- point Likert scale ranging from 1= Strongly Disagree" to "5= Strongly Agree. The reliability of the whole questionnaire was reported to be 0.82, and all the correlation coefficients obtained at the alpha level of 0.01 were significant. This should be mentioned that the questionnaire was in Persian.

3.4. Procedures

To achieve the study's objectives, several steps were undertaken. First, a sample of 322 EFL teachers from various private language institutes (such as Gooyesh, Mahan, Kish Novin, Shokouh, Safir, Taban, Hafez, Kish, etc.) in Mashhad, Iran, was selected based on Krejcie and Morgan's table (1970). These participants, who varied in gender, age, teaching experience, and academic qualifications, were chosen using a convenience sampling method. Second, two questionnaires were selected as data collection instruments. The first was the Computer, Information, and Multimedia Literacy Questionnaire (CIM-LQ for EFL Teachers) developed by Soleimani et al. (2018) to assess the teachers' literacy in computer, information, and multimedia. The second was the Online Teaching Satisfaction Questionnaire, validated by Xiang Qing (2023), designed to evaluate the EFL teachers' job satisfaction in online teaching environments. In the third step, the questionnaires were converted into Google Forms. The links to these questionnaires were then distributed to the study participants via Telegram or WhatsApp. Finally, the data collected from the questionnaires were analyzed using SPSS software, version 26, employing various statistical methods to interpret the results.

4. Results

4.1. Data Analysis for the First Research Question

This study was conducted to assess the relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. Therefore, 'Is there any

significant relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction?' was the first research question of the current study. To gather the required data, the questionnaires were distributed among the 322 EFL teachers of the study. Descriptive statistics were used to summarize the data gathered from the both questionnaires of the study. The results are revealed in Table 1.

Table 1
Results of Descriptive Statistics for the Teachers' Computer, Information and Multimedia Literacy and Teachers' Online Satisfaction Questionnaires

	N	Mean	Std. Deviation
CIMLQ	322	174.91	15.39
TOSQ	322	116.04	13.56

Based on the results of Table 1, the mean and standard deviation of scores of the teachers in the computer, information and multimedia literacy questionnaire (CIMLQ) were 174.91 and 15.39, respectively and the mean and standard deviation of the scores of the teachers in the teachers' online satisfaction questionnaire (TOSQ) were 116.04 and 13.56, respectively. To answer the first research question of the study, Pearson correlation was used. The results are revealed in Table 2.

Table 2
Results of Pearson Correlation for the Relationship between Teachers' Computer, Information and Multimedia Literacy and their Online Teaching Satisfaction

		CIMLQ	TOSQ
CIMLQ	Pearson Correlation	1	.66
	Sig. (2-tailed)		.000
	N	322	322
TOSQ	Pearson Correlation	.66	1
	Sig. (2-tailed)	.000	
	N	322	322

Based on the results of Table 2, the level of significance was .000 and the r- value was .66. The results revealed that there was a significant and positive correlation between the Iranian EFL teachers' CIMLQ and their TOSQ. Indeed, the results revealed that the teachers with high computer, information and multimedia literacy had high online teaching satisfaction.

4.2. Data Analysis for the Second Research Question

Predicting the relationship between the components of teachers' computer, information and multimedia literacy and their online teaching satisfaction was the second aim of the study. Therefore, 'Can the components of EFL teachers' computer, information and multimedia literacy predict the Iranian EFL teachers' online teaching satisfaction?' was the research question of the study. To answer the research question, multiple regression was used. The results of descriptive statistics are revealed in Table 3.

Table 3
Results of Descriptive Statistics for the Components of Teachers' CIMLQ and their TOSQ

	Mean	Std. Deviation	N
TOTSQ	116.04	13.56	322
CL	79.36	9.78	322
IL	60.10	7.69	322
ML	35.58	4.51	322

Based on the results of Table 3, the mean and standard deviation of the scores of the teachers in teachers' TOSQ was 116.04 and 13.56, respectively. Furthermore, the mean score of the teachers in

computer literacy (CL) component of the questionnaire was 79.36, the mean score of the teachers in the information literacy (IL) component of the teachers' computer, information and multimedia literacy questionnaire was 60.10, and the mean score of the teachers in the multimedia literacy (ML) component of the teachers' computer, information and multimedia literacy questionnaire was 35.58. The results of model summary are revealed in Table 4.

Table 4
Results of Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.38	.14	.13	12.58

Based on the results of Table 3, the R- value was .38 and the Adjusted R Square was .14. The results showed the components of CIMLQ can explain 14% of the variation of teachers' online teaching satisfaction. The results of ANOVA test are revealed in Table 5.

Table 5
Results of ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8627.82	3	2875.94	18.14	.000
	Residual	50404.47	318	158.50		
	Total	59032.30	321			

Based on the results of Table 5, the level of significance was .000. Since the level of significance was less than 0.05, it can be concluded that the components of teachers' CIMLQ significantly predicted the Iranian EFL TOTS. The results of Coefficients are revealed in Table 6.

Table 6
The Results of Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
Constant	92.72	8.31		11.15	.000
Computer Literacy	-.42	.08	-.30	-5.29	.000
Information Literacy	.60	.09	.34	6.28	.000
Multimedia Literacy	.59	.16	.19	3.51	.001

As the results of Table 6 showed, computer literacy, information literacy and multimedia literacy significantly predicted the Iranian EFL teachers' online teaching satisfaction since their levels of significance were less than 0.05. Furthermore, the Beta value for the computer literacy component was -.30 and it revealed that the computer literacy component had a negative effect on the relationship between the components of EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. Furthermore, the Beta value for the information literacy component was .34 and it revealed that this component of the questionnaire made the strongest unique contribution to explaining the teachers' online satisfaction.

should be clearly described in a concise manner. Results for different parameters should be described under subheadings or in a separate paragraph. Table or figure numbers should be mentioned in parentheses for better understanding.

5. Discussion

As mentioned above, the current study was done to assess the relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. The

results of Pearson correlation showed a positive and significant correlation between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction.

The findings of this study align with those of Soleimani et al. (2018), who examined computer, information, and multimedia literacy among 255 Iranian EFL teachers. Their results revealed that EFL teachers' proficiency in multimedia and information literacy ranged from low to moderate, highlighting the need for enhanced teacher training and preparation for integrating technology into language instruction. This underscores the necessity for educators to be adequately trained to utilize modern technology effectively.

Similarly, the study's results are consistent with the research by Pham and Nghiem (2022), which identified key predictors of teacher satisfaction and their experiences with live online teaching during the COVID-19 pandemic in Vietnam. Their findings indicated that factors such as online interaction, institutional support, technology-related issues, and students' online efficacy significantly impacted lecturer satisfaction. The study also aimed to predict the relationship between teachers' computer, information, and multimedia literacy components and their online teaching satisfaction. Multiple regression analysis demonstrated that all these literacy components significantly predicted online teaching satisfaction. These findings support Yılmaz's (2023) research, which investigated the relationship between students' e-learning readiness, perceptions of online interaction, satisfaction, and academic achievement. Yılmaz found that e-learning readiness and interaction perceptions are predictors of online learning satisfaction, with interaction having a particularly strong impact.

This study underscores the vital role of digital literacy—including computer, information, and multimedia literacy—in influencing Iranian EFL teachers' satisfaction with online teaching. The significant correlation between these literacy components and teaching satisfaction highlights the importance of equipping teachers with digital skills necessary for effective online education. Specifically, information literacy, which involves the ability to locate, evaluate, and use information, and multimedia literacy, which entails understanding and creating digital media, emerged as crucial predictors of online teaching satisfaction. These skills are essential for engaging students and enhancing the online learning experience. One strength of the study is that it does not limit its scope to basic computer skills; instead, it considers information literacy and multimedia literacy, both of which are essential for online pedagogy. This comprehensive approach provides a more nuanced understanding of the factors that contribute to teachers' satisfaction with online teaching, ensuring the study's relevance in a rapidly evolving educational landscape.

This study offers several benefits when compared to other studies (Soleimani et al., 2018; Yılmaz, 2023); in the field of EFL teaching and online education. Unlike many previous studies, which often focus on students' outcomes or teachers' basic technological skills, this research takes a more holistic view by incorporating information and multimedia literacy alongside computer literacy. The inclusion of multimedia literacy is particularly significant, as it emphasizes the importance of creating engaging, interactive learning environments. Other studies (Soleimani et al., 2018) typically focus on teachers' use of learning management systems or video conferencing tools, but they rarely explore how teachers' ability to effectively use multimedia content contributes to their satisfaction. This distinction allows the study to provide a broader perspective on the skills needed for successful online teaching, offering valuable insights for improving teacher training programs. In summary, the study offers a unique and important contribution to discussions on EFL teaching in online environments by highlighting the multifaceted nature of digital literacy and its impact on teacher satisfaction. While its limitations in generalizability and qualitative depth are important considerations, the study provides a valuable framework for further research and practical applications in teacher training, particularly regarding the integration of multimedia tools in online education.

However, a notable limitation of the study is its focus on Iranian EFL teachers. The findings, while insightful, may not be fully generalizable to other educational contexts. Educational systems vary widely in terms of digital infrastructure, teacher training, and cultural attitudes toward technology. Therefore, the results may not apply to regions where teachers have different levels of access to technological tools or where online teaching is less common. Moreover, the study's quantitative nature limits the depth of the discussion. Although it effectively measures the relationship between different types of literacy and teacher satisfaction, it would have benefited from qualitative insights, such as interviews with teachers, to explore their experiences in greater detail. This could have enriched the

findings by revealing the specific challenges teachers face when trying to improve their digital skills for online teaching.

6. Conclusion

The findings of the study revealed that there was a significant relationship between Iranian EFL teachers' computer, information and multimedia literacy and their online teaching satisfaction. Furthermore, the results showed that the information literacy and multimedia literacy components of computer, information and multimedia literacy questionnaire significantly predicted the Iranian EFL teachers' online teaching satisfaction. These findings suggest that professional development programs for EFL teachers should prioritize enhancing these areas of digital literacy to improve overall teaching satisfaction and effectiveness in an online environment. By fostering these competencies, educational institutions can better support their teachers, ultimately leading to more positive teaching experiences and potentially better learning outcomes for students. As online teaching becomes more prevalent, the ability of teachers to effectively use digital tools and resources directly impacts their teaching satisfaction and, consequently, their overall teaching effectiveness. The findings of this study emphasize that digital literacy is not a monolithic construct but comprises multiple components, each contributing uniquely to the teaching experience.

The study underscores the need for ongoing support and resources to help teachers develop their digital literacy. Institutions should consider providing continuous training and access to digital tools and resources. This support can help teachers stay current with technological advancements and pedagogical strategies, fostering a more adaptive and resilient teaching workforce.

Moreover, the findings suggest that policymakers and educational leaders should recognize the integral role of digital literacy such as information literacy and multimedia literacy in teacher satisfaction and student success. Investment in digital literacy training and infrastructure can yield significant benefits, enhancing the overall quality of education in the digital age. In conclusion, the findings of the study provide compelling evidence that digital literacy, particularly information and multimedia literacy, is a critical determinant of online teaching satisfaction among Iranian EFL teachers. By acknowledging and addressing the specific digital literacy needs of teachers, educational institutions can enhance teaching satisfaction and effectiveness, ultimately contributing to better educational outcomes.

Based on the limitations and delimitation of the study, future research should explore the longitudinal impact of digital literacy development on teaching practices and student achievement, as well as investigate the specific challenges and barriers teachers face in different educational contexts. Further research on the relationship between Iranian EFL teachers' computer, information, and multimedia literacy and their online teaching satisfaction should explore the impact of targeted professional development programs aimed at enhancing digital literacy skills. Investigating how these programs influence teaching satisfaction and effectiveness over time, particularly through longitudinal studies, can provide valuable insights. Additionally, examining the role of technological infrastructure and institutional support in facilitating teachers' use of digital tools, as well as comparing these findings with data from other countries, can help identify best practices and unique cultural factors. This comprehensive approach will contribute to a deeper understanding of the factors that enhance online teaching experiences and satisfaction among Iranian EFL teachers. Finally, the effect of gender differences on teachers' computer, information and multimedia literacy and their online teaching satisfaction can be investigated in other studies.

Acknowledgments

We would like to thank the editors and the reviewers of the journal for their helpful and constructive comments. Also, we thank everyone who helped us to gather the data and prepare the present article.

Declaration of Conflicting Interests

The authors declare that they have no conflicts of interest.

Funding

The authors have received no financial support for the research and publication of this article.

Declaration of AI-Generated Content

We acknowledge the use of Artificial Intelligence to refine the academic language and accuracy of the work. The output was then modified further to better represent tone and style of writing.

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