Iranian EFL Teachers' Perceptions Toward Technology Integration, TPACK, Attitudes Toward Technology, and School Climate: The Case of Public Schools Versus Private Institutes

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Abstract

The current study is an endeavour to examine Iranian EFL teachers' perceptions toward implementing ICTs, TPACK, school climate and attitudes toward technology in two major educational contexts (i.e., public schools and private institutes). To that end, data were collected from a total number of 120 EFL teachers providing services in either public schools or private institutes. The results from applying independent samples t-test indicated significant differences between the two contexts regarding the teachers' perceptions of their educational climate and the technology integration trends provided in each. The notable difference between the two contexts was also established, indicating that teachers working in private institutes carried more positive perceptions toward implementing technological advancements than their public school counterparts. In contrast, no significant difference was detected in terms of the participants' TPACK and attitudes toward technology. The findings are discussed in light of the available literature, and suggestions for further research are provided.

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Introduction

With the ability to characterise a situation (Dey, 2001), context is expressed as a setting which impacts the acquisition of skills (Sherwood, 2004) and enriches the quality of English as a foreign language (EFL) instruction (Atay, 2007). In addition to its promising impact on the quality of education, studies have also investigated multiple factors associated with the element of context by examining teachers' perceptions. Drawing on teachers' self-reports, incentives toward working (Khani & Mirzaee, 2015), motivation in the workplace (Syamananda, 2017), level of job satisfaction and anxiety (Liu et al., 2022), provision of a satisfying teaching situation (Li, 2023), and the extent to which learners were motivated (Canrinus et al., 2024) were several factors influenced by context in EFL teaching.

In addition, studies have also investigated the impact of contextual factors on EFL teachers' perceptions toward technology integration and TPACK (technological, pedagogical and content knowledge). As opined by EFL teachers, context-related factors such as equipment and e-resources (Khan, 2013), technological support (Chabban & Ellili-Cherif, 2016), the provision of tech-training courses (Jeong, 2017), implementation of teacher preparation programs aligned with upgrading teachers' technological literacy (Kuru Gonen & Zeybek, 2022), sufficient technological infrastructures (Gunes & Adnan, 2023), and psychological preparations (Yang & Wang, 2024) are in alignment with teachers' incentives to integrate technology into their instructions. Therefore, context is considered a determining factor in utilising technological advancements. Furthermore, an immense number of studies have held the idea that teachers' perceptions of their TPACK are influenced by the context in which they work (e.g., Abubakir & Alshaboul, 2023; Boonsue, 2021; Estaji & Sanajou, 2024; Tseng et al., 2020).

The impact of context-related factors on teachers' perceptions of their school climate as a convenient setting for using ICTs (Internet Communication Technologies) is also examined. As announced by teachers, contextual factors such as the sufficiency of computer facilities (Nim Park & Son, 2009), administrational support (Timucin, 2006), and teachers' technological literacy (Wu et al., 2022) profoundly influence teachers' perceptions of their school setting with respect to the use of technology. Finally, contextual factors are of equal importance when it comes to teachers' attitudes regarding the use of technology. Technical support and availability of ICT resources (Khlaif, 2017), the provision of training courses (Wilson, 2021), the environmental challenges while integrating ICTs (Mozafari et al., 2023), and the provision of appropriate infrastructure (Kianinezhad, 2024) are a number of context-based factors that directly influence teachers` attitudes toward technological advancements in EFL education.

Inspired by the direct association between context and teachers' perceptions toward technology integration, TPACK, school climate, and attitudes toward technology, the four addressed factors can be utilised as four major standards to unravel the difference

between different educational contexts comparatively. One of the major context-based groupings found within the country in which the current research was conducted and can lead to a justified contextual comparison is the two major platforms of public schools and private institutes. Furthermore, to date, the two addressed milieus have been surveyed addressing multiple educational aspects and, accordingly, significant differences have been captured between the two concerning the method of administration in-class activities (Gholami et al., 2016), teaching method effectiveness (Soodmand Afshar & Hamzavi, 2017), quality of instructions (Yas et al., 2024), and other forms of contextual variations (Shirazizade et al., 2024).

Despite the comprehensiveness of the existing comparisons, studies have missed addressing the differentiations between the two contexts in accordance with the teachers' perceptions toward technology integration, TPACK, school climate, and attitudes toward technology. Having established that context and the four above-mentioned elements are in direct connection, as addressed earlier, an authentic standard for comparing teachers' perceptions toward technology integration, their TPACK, school climate, and attitudes toward technology can be offered in this respect. With that in mind, this study explores the differences between the two contexts based on the four addressed variables.

Literature review

Technology Integration

Characterised by any sort of technology implementation in the teaching milieu (Mertala, 2019; Tondeur, 2019; Yurtseven Avci et al., 2020), the application of technological advancements is extensively explored by delving into teachers' perceptions. Surveying a group of EFL teachers, Ding et al. (2019) stated that smart technology integration and the involvement of technological advancement provide eye-catching assistance for teachers in various contexts and result in significant improvements in their classes by enhancing their teaching quality. Moreover, introducing an innovative technology integration model, the interviewed teachers in a Turkish EFL context announced that ICTs are crucial to EFL education and held positive attitudes toward using them (Harmandaoglu et al., 2019). In another study, a crew of teachers who have had their professional development classes regarding the use of technology have been investigated. As the results have indicated, implementing technological advancements results in being time-efficient and productive (Boonmoh et al. (2022). A group of faculty members who announced a variety of opinions over the integration of technological advancements was also examined. As the participants have declared, technological tools enhance the EFL students' English proficiency and contribute to the accuracy of the teachers during their teaching career (Mohamed, 2024)

Finally, further investigations in this respect have indicated that being engaged in tech-based classrooms may positively impact the quality of teaching in an interactive and

tailored way (Sari, 2024), ease of accessing materials and their storage (Albaqami, 2024) and efficiency of language instructions (Yang et al., 2024).

Respecting this significance in EFL education, as mentioned above, studies have explored some factors influencing the process of using ICTs. In this regard, many studies have addressed the role of context in predicting EFL teachers' perceptions toward technology use. Chaaban and Ellili-Cherif (2016) stated that sufficient technological advancements are necessary if teachers seek better technology integration. Carrying the same idea, Singh (2019) stated that despite possessing sufficient credentials for using ICTs, teachers feel challenged due to external barriers, such as insufficient ICT infrastructures and the dearth of technology-related aids in classes. Surveying 95 Iranian EFL teachers via distributing a teacher's challenges questionnaire, Taghizadeh and Hasani Yourdshahi (2020) found that paucity of skill support from schools and institutes was among the contextual challenges teachers faced while utilising technologies. More recently, Wang (2021) probed teachers' perceptions in this regard and reported that the lack of teacher training programs was a major impediment to the use of technology in EFL classes. Surveying 64 EFL teachers, Hafour (2022) indicated that abandoning technical problems is paramount for successful technology integration. Identical results were captured by Taghizadeh and Ejtehadi (2023) concerning the emergence of technical issues that may increase the teachers' resistance to integrating ICTs into their educational programs. More recently, studies on tech-based educational models have indicated that teachers who have positive intentions about the comfort and ease of using technologies in class (Liu & Ma, 2023) and easily deal with sociocultural trends in their society (Kim & Lee, 2024) carry more positive attitudes toward technology use.

Despite the extensive results regarding the impact of context on teachers' perceptions toward technology, examining the same impact within the EFL context of Iran (public schools and private institutes) has been ignored. In so doing, the current study attempts to examine the two contexts concerning their influence on teachers' perceptions of technology use.

Technological Pedagogical Content Knowledge

TPACK, introduced by Mishra and Koehler (2006), is referred to as a theoretical framework that is formulated based on the integration of seven different knowledge components. As the name implies, TPACK consists of technological knowledge (knowledge of utilising technological advancements), content knowledge (knowledge regarding the subject matter to be learned), pedagogical knowledge (knowledge of the teaching methods and processes), pedagogical content knowledge (knowledge for delivering content-specific instructions effectively), technological content knowledge (knowledge of using technological advancements for presenting the content), technological pedagogical knowledge (the knowledge for using technology in pedagogical activities) and the TPACK (the ability to use technological advancements in

teaching and representing the subject matter in an effective way concerning the interaction of technological, pedagogical and content knowledge).

Studies have investigated TPACK and the teaching assistance it can provide in education. Koehler et al. (2013) highlighted the integration of the three knowledge domains (Technology, Pedagogy and Content), which, by producing dynamic knowledge, provide the prerequisites for successful technology integration. Cahyono et al. (2016) established that teachers' control over the three domains of technology, pedagogy and content matters if they seek to experience a more convenient and appealing teaching opportunity. More recently, surveying a total number of 261 Chinese EFL teachers, Zhang and Chen (2022) found that teachers' positive perceptions of their TPACK influence their technology use in both online and face-to-face instructions and, finally, Syawanllina and Suganda (2023) stated that TPACK is highly recommended for establishing digitalisation in education.

Addressing the critical demand for improving teachers' TPACK, as mentioned above, many studies have investigated the factors influencing teachers' TPACK levels by examining their perceptions. Isler and Yildirim (2018) highlighted the element of contextual accessibility and support as a definitive factor for teachers to hold positive perceptions toward their TPACK. The results from investigating EFL teachers' self-reflections revealed that their knowledge of technology, pedagogy and content can be improved if only provided with sufficient professional development programs (Ogalo et al., 2022). More recently, surveying teachers from multiple contexts has indicated that factors such as teacher training programs (Naing & Wiedarti, 2023), their digital literacy (Pehlevan & Unal, 2024) and participation in online teaching sessions (Cengiz & Kacar, 2024) are highly promising in improving teachers` perceptions of their TPACK.

Attitudes Toward Technology

Equally highlighted throughout the literature are the teachers' attitudes toward technology integration. Yuksel and Kavanoz (2011) indicated that EFL teachers' attitudes toward technology play a pivotal role in integrating ICTs into the process of teaching and education. Furthermore, signifying the challenges teachers may face in alignment with using technology, the direct association between teachers' attitudes toward technology and its actual use has been declared (Taghizadeh & Basirat, 2022). The study has depicted that teachers' positive assumptions toward integrating ICTs into an EFL context are critical for utilising them in language instruction. Furthermore, structural equation modelling was applied to analyse the collected data from 261 Chinese EFL teachers. Zhang and Chen (2022) stated that teachers' attitudes have positively influenced their perceptions toward technology use. Finally, yet importantly, teachers' attitudes in the EFL context not only is manifested as a critical element in developing an inclination toward using ICTs (Pokrivcakova, 2024) but also act as a significant predictor to provoke positive intentions toward technology use in classes (Liu & Wang, 2024; Zafari, 2024)

Having established that attitude is a promising factor in respecting the use of technology, studies have examined the extent to which external factors such as context impact the development of teachers' attitudes toward technology. Huang et al. (2019) investigated the role of context on teachers' attitudes toward technology. The results from interviewing a total of 14 EFL teachers revealed that facilitating conditions provided by the educational context influence teachers' attitudes toward technology use. Furthermore, Wijnen et al. (2021) established that the accessibility of good quality technological materials determines the instructors' attitudes toward technology. This demonstrates that attitudes toward technology are context-dependent, meaning that the prerequisite conditions determine the teachers' intentions toward technology. Finally, employing Boundary Crossing Theory as the theoretical framework, Yan and Wang (2022) examined teachers' attitudes toward using ICTs and, as the results from teachers' self-reports employed, systematic and technical support were found as the two contextual factors influencing their attitudes toward technology.

School Climate

School climate, entailing both technical (Stringfield & Teddlie, 1990) and environmental factors (Tschannen-Moran et al., 2006) of an educational setting, has been broadly addressed concerning its significance in education from the teachers' perspectives. Howitt (2007) highlighted the impact of school climate on teachers' confidence. Studying a group of elementary school teachers, O'Brennan et al. (2014) concluded that school climate-related matters influence language teachers' perceptions of their teaching process. In other words, teachers' perceptions of students and class depended on the environment in which they taught. Finally, school climate is critical in developing teachers' commitment to their profession (Bagheri et al., 2024) and raising their job satisfaction (Zhou et al., 2024).

In addition, studies have examined school climate and its significance in connection with teachers' perceptions of technology integration in the EFL context. Aydin (2013) stated that teachers lack technical and instructional support in their teaching environment. Furthermore, in an attempt to measure EFL teachers' preparedness concerning the use of ICTs, it was stated that technical facilitation of the educational environment plays a decisive role (Rahimi et al., 2014). Holding the same idea, Nurhidayat et al. (2023) announced that language teachers find facilitating conditions promising when using technological advancements in classes. Therefore, as the above-mentioned studies reveal, a powerful connection exists between the two above-mentioned factors.

Studies have mentioned how contextual factors affect teachers' perceptions of their school climate with respect to its appropriateness for technology use. Studying a total of 70 Turkish EFL teachers, Onalan and Kurt (2020) stated that despite the positive attitudes toward their school climate, the surveyed teachers believed that higher administrative support is necessary for providing teachers with a more positive attitude

toward their school climate for using technology. Fathi and Ebadi (2020) indicated that decent facilitating conditions promote the quality of the teaching environment and, therefore, facilitate the application of technological advancements. It is also worth mentioning that the lack of professional developmental programs, classified as another contextual factor, negatively influences EFL teachers' perceptions of their educational environment regarding the use of technologies (Tanaka & Saito, 2021). Finally, the existing literature suggests that the educational climate in which teachers perform acts as a significant predictor in framing their intentions toward technology use (Authors, 2020).

Overall, as mentioned earlier, the element of context is addressed numerously due to its promising effect on teachers' perceptions of technology integration, TPACK, school climate and attitudes toward technology. Indeed, it is the notion of context which acts as one of the decisive elements in discriminating teachers' likelihood to use technology (Ifinedo & Kankaanranta, 2021), their existing attitudes toward ICTs (Nor et al., 2019), the literacy and control they own over tech-based advancements (Swallow & Olofson, 2017), and their perceptions of the climate in which they teach (Koth et al., 2008). Therefore, it can be deduced that any difference in context may create different perceptions regarding the four above-mentioned factors. Furthermore, within the context of Iran, the two major contexts of language learning are private institutes and public schools. Inspired by the difference between the two contexts (as highlighted throughout the literature) and the possible impact this difference may have on the four addressed factors inside these two contexts, the current research is to provide a comparison between the two major Iranian educational platforms to find out whether any significant difference is revealed respecting the four given factors. To that end, the following research question has been formulated:

Is there any significant difference between Iranian EFL teachers in public schools and private institutes regarding their perceptions of technology integration, TPACK, school climate, and attitudes toward technology?

Method

Participants

A total of 120 EFL teachers providing services in public schools (n=60) and private institutes (n=60) were selected to participate in the current study via a convenient sampling procedure. The participants' ages ranged between 18 and 62, and their experiences varied from less than one to 20 years. Concerning their academic degree, nearly all the participating teachers held a bachelor's or master's degree in English-related majors, including English Teaching, English Literature and English Translation. The remaining teachers (less than 1%) self-reported possessing degrees in non-English-related majors like Physics, Chemistry and Medicine. All participants were given the chance to participate in the current research by their willingness and were ensured that their

responses to the questionnaire items would remain strictly confidential and be used only for research purposes.

Instrumentation

In order to measure EFL teachers' willingness to integrate technology, the questionnaire adapted by Hedayati and Marandi (2014) was utilised. Although the questionnaire was originally developed by Vannatta and Banister (2009), the current study utilised the adapted version due to the similarity of the context in which both studies were held. Moreover, since the questionnaire was tailored to fit the Iranian EFL context, the reliability of the items (r= .86) was verified by Hedayati and Marandi (2014). The adapted version comprised a total number of 59 items, including four sections. However, as the current study was concerned with EFL teachers' perceptions toward technology integration, 13 items were selected from the third section of the questionnaire (Appendix A). Teachers' responses to this section were evaluated based on 5-point Likert scale items ranging from 1 (never) to 5 (always).

The survey originally developed by Cheng (2017) was adopted to gauge the participants' TPACK. Incorporating 23 items, the devised survey addressed all seven knowledge domains within the TPACK framework. However, since the prior concern was to investigate teachers' self-reports regarding their technology-related literacies in EFL instruction, the current study managed to include only 13 of the items targeting teachers' TK (4 items), TPK (3 items), TCK (3 items) and TPACK (3 items) (Appendix B). In other words, measuring the three remaining domains of PK, PCK and TPK was not desired since they did not match the aim of the study. The estimated Cronbach's alpha for the original questionnaire was reported as .95.

Finally, the two remaining factors addressing EFL teachers' perceived attitudes toward technology and school climate were measured using Aydin's (2013) questionnaire. Originally developed by Papanastasiou and Angeli (2008), the adapted version provides a survey comprising 27 items targeting EFL teachers' self-reports considering their school climate and attitudes toward technology. Out of the total number of items included in the questionnaire, 15 were recruited to ascertain EFL teachers' attitudes toward ICT (Appendix C). The rest of the questionnaire (12 items) was framed to gauge teachers' perceptions of their school climate (Appendix D). As Aydin (2013) provided, Cronbach's alpha for EFL teachers' attitudes toward technology and school climate perceptions were reported as .83 and .92, respectively. Responses to the items measuring EFL teachers' TPACK perceptions (Cheng, 2017) and their perceived attitude toward technology and school climate (Aydin, 2013) were evaluated based on a 5-point Likert scale ranging from 1(strongly disagree) to 5 (strongly agree).

Data Collection and Analysis Procedures

Following a quantitative approach, 180 questionnaires were distributed among Iranian EFL teachers in hard copies and email attachments. Of the total distributed number of surveys, 140 were returned. However, only 120 questionnaires remained since the incomplete or carelessly completed ones were discarded from the analysis. The gathered data were then fed into SPSS (21st version), and Cronbach's alpha was assessed to ensure the internal consistency of the items in various survey sections. An evaluation of the normality of distribution followed this. Upon examining the questionnaire's psychometric properties, independent sample t-tests were conducted to determine whether EFL teachers in the two major educational contexts differed regarding their perceptions of technology integration, TPACK, attitudes toward technology, and school climate.

Findings

The variables were analysed considering the descriptive parameters (e.g., means and standard deviations) and tests of reliability and normality of distribution. Concerning the reliability of the items, values for Cronbach's alpha ranged between .45 and .89 for public schools and from .65 to .87 for private institutes (Table 1). This meant the teachers' responses to questionnaire items within each subscale had relatively high internal consistency. Moreover, skewness and kurtosis values targeting public school teacher responses, as illustrated in Table 1, varied from -2.13 to 1.46 and -.15 to 9.07, and considering the private institutes, the same values ranged between -.50 to 1.24 and -.62 to 4.20, respectively, signifying that the studied variables had a sufficiently normal distribution.

Table 1

Descriptive statistics of EFL teachers' responses to questionnaire items

	Skewness		Kurtosis		Alpha	
	Pub	Pri	Pub	Pri	Pub	Pri
Tech-integration	1.46	-0.50	4.51	-0.62	0.89	0.87
TPACK	0.16	-0.63	0.83	-0.32	0.87	0.82
School climate	-0.67	-0.72	-0.15	1.64	0.83	0.80
Attitudes	-2.13	1.24	9.07	4.20	0.45	0.65

Note. Pub = Public; Pri = Private

Having ascertained that the distribution of items was relatively normal and responses to the questionnaires enjoyed a high level of internal consistency, the researchers conducted a series of independent sample *t*-tests to detect possible differences between the perceptions of public school teachers and that of their counterparts in the private sector considering the four research variables. As illustrated in Table 2, the results revealed a statistically significant difference (*p* = 0.006) between EFL teachers in private sectors and those in public schools with respect to their perceptions toward integrating technological advancements. Comparing EFL teachers' mean scores in both contexts, it can be deduced that teachers who provided service in private institutes (M = 3.60) were more willing to integrate technology into their teaching instruction in comparison with their public school counterparts (M = 2.15)

Moreover, a significant difference was found between the two contexts regarding EFL teachers' perceptions of a technology-induced educational climate (*p* = 0.000). More specifically, teachers working in private institutes (M = 3.22) carried more positive perceptions regarding their teaching environment from the technological perspective. They were more satisfied with their school climate compared to teachers providing service in public schools (M = 2.83).

Table 2

Perceptions toward technology integration, TPACK, school climate, and attitude toward technology: Public schools versus private institutes

	Contextual Divisions					
	M		SD			
	Pub	Pri	Pub	Pri	*t*	Sig. (2-tailed)
Tech-integration	2.15	3.60	0.69	3.9	2.78	0.00*
TPACK	3.62	3.72	0.53	0.42	1.16	0.24
School climate	2.83	3.22	0.70	0.43	3.68	0.00**
Attitudes	3.21	3.20	0.34	0.38	-0.22	0.82

Note. P < 0.01*; P < 0.001**; M = Mean; SD = Standard Deviation

Conversely, no significant difference was found between the two contexts in terms of teachers' TPACK perceptions and attitudes toward technology. This meant that although teachers working in private institutes (M = 3.72) were slightly more positive than their

counterparts in the public sector (M = 3.62), considering their TPACK perceptions, the difference was not significant. In addition, no significant discrepancy was captured between teachers regarding their perceived attitudes toward technology in private institutes (M = 3.20) and public schools (M = 3.21).

Discussion

This study provides insights regarding the differences in teachers' perceptions in Iran's two major educational contexts (i.e., public schools and private institutes). The findings confirm and extend the results of the previous research in similar contexts (e.g., Chaaban & Ellili-Cherif, 2016; Khan, 2013; Taghizadeh & Ejtehadi, 2023) with regard to the role of context in making a significant difference in teachers' perception toward technology integration. More precisely, teachers' perception toward utilising technology in private institutes was significantly higher than that of their counterparts in public schools, meaning that teachers in private institutes are more willing to integrate technology into their teaching instructions and enjoy a relatively higher rate of interaction with tech-based strategies and instructions.

Witnessing a higher technology-induced educational environment in the private sector (as mentioned above) can be explained by the provided analysis resulting from the distributed questionnaire. More precisely, the mean scores obtained from a parallel comparison of the responses to questionnaire items from the addressed contexts (public schools and private institutes) have extensively interpreted the differences in this respect. In what follows, the items are presented in the order they were administered in the questionnaires (see Appendices), and further explanations are provided for the comparison implemented by each item. As it is perceived, within the private sector, inspectors are willing to encourage teachers to enhance the integration of computers and technological advancements into their teaching processes (item 18). Furthermore, teachers receive support from their colleagues and are encouraged to use technology in private institutes (item 21). To this point, the results align with Chabban and Ellili-Cherifs' (2016) findings in which the element of support in technology integration is referred to as a determining factor. Following this was the attention devoted to providing instructional support for using ICTs in private institutions (item 24). The results confirm the previous research since training courses' importance for successful technology integration is highlighted (Jeong, 2017).

Moreover, results revealed a significant difference between the public and private sectors concerning teachers` perceptions of their school climate. However, no significant differences were captured between the two contexts, considering EFL teachers' attitudes toward technology and their TPACK level. More precisely, teachers working in either of the contexts (public or private) carried a positive attitude toward technology utilisation in their teaching and learning process. Furthermore, teachers in the two contexts were not

significantly different based on their knowledge of technology, pedagogy and content (TPACK). Due to the results gained from the comparison of the two contexts, it can be assumed that teachers in both contexts are knowledgeable enough to integrate technology with ease into the classes, and they have this positive attitude, which, as the literature suggests, is the key to integrating technology successfully into their classes (Abbitt & Klett, 2007; Adeyele, 2024; Habibi et al., 2023).

As the current study indicates, teachers in public schools and private institutes carry significantly different perceptions with respect to school climate and technology integration. Having established that school climate acts as a significant predictor for building teachers' perceptions toward technology integration (Authors, 2020), it can be argued that the difference in teachers' perceptions toward technology integration originates from their different perceptions of the school climate in which they work. In other words, diverse perceptions toward technology integration can be justified by teachers' different opinions of their school climate since the latter element acts as a significant predictor, as the literature suggests.

Conclusion

The present study sets out to examine the contextual differences in EFL teachers' perceptions of the use of technological advancements, TPACK, school climate, and attitudes toward technology in public schools and private institutes. As the study implies, teachers providing services in private institutes carry more positive perceptions toward technology utilisation; they are more willing to provide EFL instructions using technological advancements. Further, it is also assumed that perceptions toward technology integration in private milieus are positive since teachers experience better and more qualified administration/institutional support and are provided with better teaching facilities and instructional support. Indeed, teachers in the private sector have more positive perceptions of technology integration due to the satisfactory teaching materials given by institutions, administrators, and other colleagues. Also noteworthy is the impact of teachers' perceptions of their school climate. Due to the nationwide curriculum they are posed with, teachers in public schools face an entirely different teaching climate compared to their private sector counterparts, who tend to follow the provided decentralised system. Considering the previously established role of school climate as a predictor for better technology integration, this significant difference can be assumed as a key element for the significant difference found in teachers` perceptions of technology integration. The element of school climate and the encircled factors it covers can be referred to as a prerequisite for enhancing teachers' willingness to integrate technology in educational contexts such as Iranian public schools. In other words, since teachers in private institutes had significantly higher positive perceptions toward technology use,

remodelling the other contexts after the private institutes' educational climate can significantly enhance teachers' willingness to use technologies in their EFL instructions.

Several limitations can be noted. First, regarding data collection throughout the study, the current research examined 120 EFL teachers (60 from each of the contexts) providing services in either public schools or private institutes. Conducting the same procedure, future research can be performed, including a larger number of participants, so that more comprehensive results can be achieved. Further, to find the origins of the significant technology integration perceptions within the two contexts, the present study attempted to examine only the four selected variables. Future studies are required since there are various factors in relation to teachers' perceptions of technology utilisation. Replacing the factors can provide a more advanced perspective considering the issue targeted by the current study.

Declaration of Competing Interest: The authors declare no competing interests.

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Appendices

Appendix A. Technology Integration

Items
I use the computer to create instructional handouts or assessments for students.
I use the Internet to gather information for lesson planning.
I create electronic templates to guide student computer use.
I prepare or maintain Individualised Education Programs on the computer.
I use a handheld device (e.g. tablet computer) to organise information.
I use spreadsheet (e.g. excel) to maintain grade book and/or attendance.
I use Email to communicate with colleagues and administrations in my school/district.
I use Email to communicate with students or parents.
I post class info (homework, products) on an electronic bulletin board like telegram, website, or blog.
I use technology to present information to students.
I demonstrate computer applications to students.
I provide/create electronic learning centers (e.g. learning groups in telegram).
I use technology to adapt an activity to students' individual needs.

Appendix B. TPACK

Items
I have the technical skills to use computers effectively.
I can learn technology easily.
I know how to solve my own technical problem when using technology.
I keep up with new important technologies.
I can facilitate my students' collaboration with each other using technology.
I can facilitate my students to use technology to plan and monitor their own learning.
I can facilitate my students to reflect their learning on the English language using technology.
I can use the software that is created specifically for English language learning.
I know about the technologies that I have to use for research of the content of the English language.
I can use appropriate technologies (e.g. multimedia or internet resources) to represent the English language.
I can teach lessons that appropriately combine the English language content, technologies, and teaching strategies.
I can select technologies to use in my classroom that enhance what I teach, how I teach, and what students learn.
I can provide leadership in helping others to coordinate the use of content, technologies, and teaching approaches at my school.

Appendix C. Attitudes toward technology

Items
The computer is a valuable tool for teachers.
I feel comfortable using computer as a tool in the teaching and learning process.
The computer helps teachers teach in more effective ways.
The computer will change the way that I teach.
The computer will change the way that students learn in my classes.
The computer helps students understand concepts in more effective ways.
The computer helps students learn because it allows them to express their feelings in better and different ways.
The use of the computer as a learning tool excites me.
If something goes wrong while using computers in teaching, I will not know how to fix it.
I can do what the computer can do equally well.
The use of computers in teaching and learning stresses me out.
The computer is not conducive to good teaching because it creates technical problems.
The idea of using a computer in teaching and learning makes me skeptical.
The computer is not conducive to student learning because it is not easy to use.
The use of computers in teaching and learning scares me.

Appendix D. School climate

Items
There are other teachers in my school who incorporate computers in the teaching and learning process.
I often exchange ideas about technology integration with other teachers.

The inspector encourages me to integrate computers in the teaching and learning process.

The school principal encourages me to integrate computers in the teaching and learning process.

Teachers in my school are well informed about the value of computers as a part of teaching and learning process.

Other teachers encourage me to integrate computers in the teaching and learning process.

In school meetings, we frequently discuss the importance of integrating computers into the school curriculum.

The technical support for using technology in my school is adequate.

The instructional support on how to use technology in my school is adequate.

A variety of computer software programs are available for use in my school.

The computer coordinator encourages me to integrate computers into the teaching and learning process.

The technical infrastructure in my school is adequate.