Unpacking EFL Teachers' TPACK Thru the Distance Education

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ABSTRAK

Abstract: The growth of distance education provides an accessibility of teaching-and-learning-process involving the use of ICT. Hence, teachers' competencies regarding the integration of ICT also one of the key success of teaching. Through TPACK, this study aims at investigating EFL teachers' skills on technology integration and their preferable ICT based learning system amidst distance education. Moreover, this study also intends to analyze whether EFL teachers' TPACK are significantly different in terms of teaching categories and gender. This survey study implicated 139 in-service EFL teacher in the city of Malang, East Java, Indonesia. The data were collected through questionnaire and analyzed by computing the frequency, ANOVA, and t-test. The finding revealed that the EFL teachers' TPACK was decent. Furthermore, gender and teaching categories were not regarded as the factors that influenced EFL teachers' TPACK. Lastly, Google Classroom was perceived as the most preferable ICT based learning system according to the teachers. Regarding the result of analysis, recommendation for teachers and educational stakeholders were also made in this study.

Abstrak: Perkembangan Pendidikan Jarak Jauh (PJJ) menawarkan aksesibilitas proses belajar-mengajar yang sangat melibatkan penggunaan TIK. Oleh karena itu, kompetensi guru terhadap integrasi TIK juga diangap sebagai salah satu kunci keberhasilan pembelajaran. Melalui TPACK, penelitian ini bertujuan untuk menginvestigasi ketrampilan guru EFL terkait integrasi teknologi dan sistem pembelajaran berbasis TIK yang guru EFL gunakan saat Pembelajaran Jarak Jauh (PJJ). Selain itu, penelitian ini juga bermaksud untuk menganalisa perbedaan TPACK guru EFL berdasarkan kategori mengajar dan gender. Penelitian survei ini melibatkan 139 guru EFL di Kota Malang, Jawa Timur, Indonesia. Pengumpulan data dilakukan menggunakan kuesioner dan dianalisa dengan menghitung frekuensi jawaban responden, ANOVA, dan t-test. Hasil penlitian menunjukkan bahwa TPACK guru EFL baik. Kemudian, gender dan kategori mengajar bukanlah faktor yang membedakan TPACK guru EFL. Terakhir, *Google Classroom* merupakan media pembelajaran yang paling disukai oleh guru. Berdasarkan hasil analisa, rekomendasi untuk guru dan beberapa pihak terkait juga dibuat dalam penelitian ini.

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The expansion of distance education has indeed gained popularity for many years during this 21st century (Akaslan, 2019; Afandi et al., 2019). Its emersion offers a situation where the teaching-and-learning process is not restricted by time and place. The activity of distance education itself can be held anywhere and anytime due to its flexibility and accessibility in learning, teaching and technology (Zhang et al., 2019). The practical course towards distance education entangles the use of ICT (Information and Communications Technology) surrounded by online learning environments (Chen, Harris and Shang, 2009; Saykılı, 2018). In this respect, distance education is also inseparable from online tools, resources and interaction within teaching activities through multimedia instruction, application, interactive content delivery, interactive board, classroom management and monitoring, online assessment and others (Guohong et al., 2012).

As ICT is interconnected with every element of the educational sphere, teachers' competencies dealing with the integration of ICT in the classroom becomes one of the key success of teaching (Koehler et al., 2014). It is undeniable that ICT brings challenges for teachers to promote their technological proficiency and incorporate it into their teaching content and pedagogy (Juanda et al., 2021). Aligned with that, teachers are also anticipated to keep supporting students' learning by presenting the teaching strategies, techniques, and fundamental materials through the use of ICT (Makawawa et al., 2021). Ahmad et al. (2016) add that students can obtain an effective learning experience when teachers have proficient knowledge of

ICT. General speaking, the ability to combine both teaching pedagogy and content in the classroom with the help of ICT and its component is a requirement for an effectual learning environment and outcomes.

Concerning ICT competencies, many concepts and theories can applied to describe how teachers' abilities towards technology integration should be. In this case, Koehler and Mishra (2009) propose a framework consisting of three prominent skills in the area of teaching which teachers need to have, namely technological knowledge, pedagogical knowledge, and content knowledge. This framework is defined as TPACK (Technological, Pedagogical, and Content Knowledge). The idea of TPACK was first built by Shulman's (1987) concept which covers the mixture of pedagogical and content knowledge. Afterwards, Mishra & Koehler (2006) evolve the concept into TPACK framework in which technological knowledge is included in it. The TPACK (see Figure 1) is also conceptualized by Koehler & Mishra (2009) into seven areas of knowledge. Pedagogical Knowledge (PK) is related to teachers' understanding of teaching practices, strategies, methods, and techniques to improve students' learning (Koehler et al., 2014). Content Knowledge (CK) discusses teachers' comprehension of the fundamental materials according to the teaching subject (Koehler et al., 2014). Technological Knowledge (TK) refers to the teachers' abilities to integrate ICT into their teaching (Koehler et al., 2014). Pedagogical Content Knowledge (PCK) describes how teaching approaches can meet the suitable instructional materials so that students can understand better during the learning process (Rahimi & Pourshahbaz, 2019). Technological Pedagogical Knowledge (TPK) elaborates on teachers' proficiency in how teaching pedagogies can be integrated with ICT (Makawawa et al., 2021). Technological Content Knowledge (TCK) covers the teachers' skills of selecting, understanding, and using the ICT corresponding with the instructional materials (Koehler et al., 2013; Rahimi & Pourshahbaz, 2019). Eventually, Technological Pedagogical Content Knowledge (TPACK/TPCK) examines teachers' abilities towards the three complex knowledge of the framework. TPACK comprises the knowledge of integrating the ICT to portray the fundamental content of teaching altogether with pedagogical methods and techniques in the classroom (Makawawa et al., 2021).
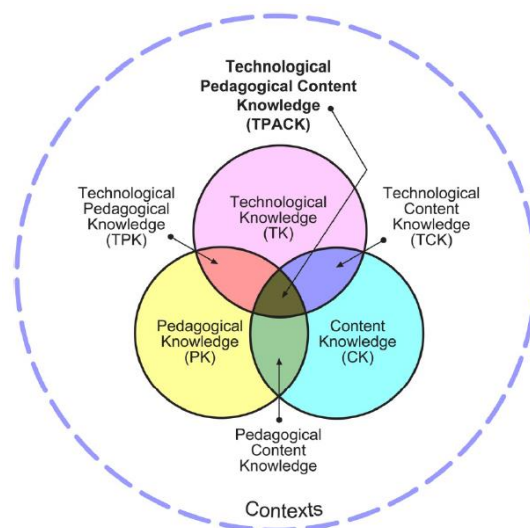

Figure 1. TPACK Framework and its seven domains

There has been a recent development of studies related to TPACK in the area of teaching and learning. Issues of TPACK across disciplines, and other factors have been explored. Some researchers analysed teachers' TPACK in the branch of Science and Mathematics (Nurina et al., 2019; Karakaya and Avgin, 2016; Bhagat et al., 2017; Kim, 2018). Moreover, studies of TPACK in the area of English Language Teaching (ELT) have been investigated as well. Singh & Kasim (2019) discovered how the TPACK framework assisted pre-service English teachers throughout their teaching practice. Meanwhile, Fathi and Yousefifard (2019) elaborated on the perceptions of Iranian EFL students towards their EFL teachers' TPACK. Afterwards, Elas et al. (2019) examined the reliability and validity of TPACK for further studies on TPACK in the area of ELT. However, studies on TPACK focusing on teachers in the field of ELT is still potential to be explored further (Turgut, 2017). Besides, finding out language teachers' responses about their ICT-integrated knowledge affect the success of English teaching and learning as well.

In respect of other factors influencing TPACK, diverse characteristics of teachers potentially become the elements affecting their ICT knowledge during the teaching and learning process (Astuti et al., 2019). Teaching categories and gender issues, for instance, may affect teachers' mastery of TPACK. It is noted that there was a few studies on TPACK regarding teachers' teaching categories and level. In the meantime, it is believed that issues on gender might also possibly become the reason for the difference in ICT knowledge between male and female teachers (Cahyani, et al., 2021). Responding to this, more

upcoming studies highlighting the difference of TPACK based on teachers' characteristic, mainly teaching categories and gender issues, need to be employed.

To fill the gap with the previous studies, this study, therefore, aims at investigating EFL teachers' TPACK amidst distance education. Accordingly, some research questions were formulated as follows: (1) How is the EFL teachers' TPACK amidst distance education?; (2) Is there any significant difference between EFL teachers' TPACK and their demographic information namely teaching categories, and gender?; (3) What kinds of ICT-based learning systems do EFL teachers integrate during the implementation of distance education?

METHOD

This present study engaged a quantitative approach by implementing a survey design. The population covered roughly 500 in-service EFL teachers from lower secondary schools and upper secondary schools in the city of Malang, East Java, Indonesia. A proportional stratification sampling procedure was used in this study. It is a sampling method that requires the researcher to split the population using some specific categories and characteristics to get the sample (Creswell, 2015). Thus, 139 EFL teachers from the three teaching categories, namely junior high school, senior high school, and vocational high school became the sample of this study. Another consideration of choosing this sort of sampling was because one of the objectives of this study measured whether EFL teachers' TPACK differed from their teaching categories. The demographic information of the sample can be seen in table 1.

Table 1. Demographic Information of the Sample

Demographics Variables	Descriptions	Frequency	Percentage (%)
Gender	Male	35	25.2
	Female	104	74.8
Age (years old)	20 – 29	33	23.7
	30 – 39	35	25.2
	40 – 49	43	30.9
	50 – 59	26	18.7
	>60	2	1.4
Level of Education	Bachelor Degree	117	84.2
	Master Degree	22	15.8
Teaching Experience (years)	1 – 5	31	22.3
	6 – 10	22	15.8
	11 – 15	28	20.1
	16 – 20	29	20.9
	> 20	29	20.9
Teaching Category	Junior High School	72	51.7
	Senior High School	35	25.1
	Vocational High School	32	23.2
Status of School	Public	67	48.2
	Private	72	51.8

As for the instrument, this study applied TPACK close-ended questionnaire adapted from Schmidt et al. (2020). A total of 26 statements within TPACK framework were employed in this study. Four points of the *Likert* scale from Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4), were applied to score the result of questionnaire responses. The indicators of TPACK questionnaire were conveyed in Table 2. During the data collection process, the researcher sent the questionnaire online through individual messages and group messages to EFL teachers in the city of Malang, East Java. The researcher also added some sections in the online questionnaire such as the participants' demographic information, general information of this study, and forms of consent for the participants. Subsequently, after one month of the process of collecting the data, 139 questionnaires were returned for further analysis.

All the data of this study were examined quantitatively SPSS (Statistical Package for Social Science) software. First, the data of EFL teachers' demographic information was analysed to know the frequency of their teaching categories, gender, and ICT based learning used amidst distance education. Second, the EFL teachers' TPACK results were examined and summarized by calculating Mean scores (M), Standard Deviation (SD), and percentages (%). Third, oneway Analysis of Variance (ANOVA) was employed to find out whether there was a significant difference in TPACK perceptions among the three teaching categories, while an independent t-test was adopted to reveal the significant differences in EFL teachers' TPACK according to gender.

Table 2. The Indicators of TPACK Questionnaire

TPACK Domains	Indicators	Statements
Pedagogical Knowledge (PK)	Adjusting teaching approaches based on the setting and students' characteristics, adapting to various teaching style, and assessing students' learning	4
Content Knowledge (CK)	Understanding the concept and theories of English and having strategies for developing English comprehension	4
Technological Knowledge (TK)	Keeping up with the development of ICT and being able to use the ICT	3
Pedagogical Content Knowledge (PCK)	Being able to select effective teaching approaches, to develop task and exercises, and evaluate students' performance	4
Technological Pedagogical Knowledge (TPK)	Being competent to select sorts of ICT enhancing both teaching approaches and students' learning, and seriously thinking about the way to use the ICT in the classroom	4
Technological Content Knowledge (TCK)	Having the ability to define ICT used and developed in ELT research, and recognizing certain ICTs to understand English	3
Technological Pedagogical Content Knowledge (TPACK)	Employing strategies to combine the fundamental materials, teaching approaches and the ICT	4
Total		26

RESULT

The result of this present study was divided into several parts, specifically ICT based learning system applied by EFL teachers amidst the distance education, Indonesian EFL teachers' TPACK, and differences in TPACK perception among EFL teachers considering their teaching categories and gender.

The ICT Based Learning System Used in the Distance Education

In the case of distance education, the implementation of ICT functions as a pivotal force to enhance the process of teaching and learning in the classroom. The data from the questionnaire disclosed that Google Classroom, WhatsApp Messenger, and Zoom Meeting were the most preferable ICT based learning system of all the various ones. Nearly half of the participants (49%) claimed that they mostly used Google Classroom for teaching during distance education. Moreover, WhatsApp Messenger took the second place as the most desirable media employed by the EFL teachers (25%). Furthermore, the third ICT based learning system which was widely selected by the EFL teachers was Zoom Video communication (24%). In the meantime, the rest of the EFL teachers also chose other various learning system to assist the content, the approach, and the activities that they conducted in the classroom such as Moodle (4%), Microsoft Teams (4%), Skype (2.1%), E-learning developed by the government (2.1%), Quizizz (1.4%), Edmodo (0.7%), Google Meet (0.7%), E-learning developed by School Foundation (0.7%). The ICT media learning systems adopted by the EFL teachers amidst the distance education are showed in table 3.

Table 3. The result of the ICT based Learning System adopted amidst the Distance Education

ICT based learning System	Frequency	Percentage (%)
Edmodo	1	0.7
WhatsApp Messenger	25	18
Zoom Video Communication	24	17.3
Google Classroom	68	49
Quizizz	2	1.4
Moodle	6	4
Google Meet	1	0.7
Skype	3	2.1
Microsoft Teams	5	4
E-learning developed by School Foundation	1	0.7
E-learning developed by the Government	3	2.1

Indonesian EFL Teachers' TPACK

The information in table 4 signifies the result of TPACK questionnaire analysis. TPACK frequency of answers according to its seven domains was computed to disclose the overall percentages of EFL teachers' TPACK. The findings indicated that the average ICT ability of EFL teachers was decent. The analysis showed that Content Knowledge (CK; 83%) was the most positive aspect of EFL teachers' TPACK, while other domains namely Technological Pedagogical Content Knowledge

(TPACK; 79%), Pedagogical Content Knowledge (PCK; 78%), Pedagogical Knowledge (PK; 76%), Technological Knowledge (TK; 76%), Technological Pedagogical Knowledge (TPK; 75%) were considered as moderate aspects. Meanwhile, it was stated that Technological Content Knowledge (TCK; 69%) was the least positive aspect among all of the domains of TPACK.

Table 4. The Result of EFL Teachers' TPACK

Domains of TPACK	Mean score (M)	Standard Deviation (SD)	TPACK Percentage (%)
Pedagogical Knowledge (PK)	12.09	1.956	76
Content Knowledge (CK)	13.21	1.661	83
Technological Knowledge (TK)	9.12	1.677	76
Pedagogical Content Knowledge (PCK)	12.40	1.545	78
Technological Pedagogical Knowledge (TPK)	12.04	1.909	75
Technological Content Knowledge (TCK)	8.25	2.154	69
Technolog / ical Pedagogical Content Knowledge (TPACK)	11.85	1.903	79

Therefore, it was inferred that most EFL teachers generally were able to combine the appropriate content, teaching techniques, and the ICT based learning system during the enforcement of distance education. The findings in PK defined that the EFL teachers were capable of implementing effective teaching techniques and developing some kinds of catchy activities to guide students' critical thinking. Besides, over half of EFL teachers were good at running the activities of teaching, the methodologies, and the assessment based on various backgrounds of students. In addition, although some of them were reluctant to play around with the features of the ICT, more than half of EFL teachers in the TK domain also were positive that they were up-to-date with the development of ICT. Afterwards, the majority of EFL teachers in the PCK domain agreed that they were capable of choosing the appropriate ICT to increase both students learning progress and their English teaching methodologies. Most of them also seriously were considerate about how to implement the ICT in the classroom effectively. However, even though the EFL teachers' TPACK showed a meaningful result, it seemed that they were less exposed with ICT developed in the ELT field as shown in TCK domain. Many of them could not define which kinds of ICT based learning system was used and developed in research in ELT area.

EFL Teachers' TPACK in Accordance to Demographic Information

The next objective of this study was to find out whether there was a statistically difference in TPACK perception among EFL teachers according to teaching categories (junior high school, senior highs school, and vocational high school). The result of the one way Analysis of Variance (ANOVA) shown in Table 5 describes that the significant level (Sig.) was higher than .05 (>0.05), so it was concluded that there were no significant differences between EFL teachers' TPACK and their teaching categories. The TPACK among EFL teachers was not distinguished by their teaching categories. Related to the insignificant result of TPACK based on teaching categories, several analysis of TPACK domains and the measure effects size were not defined in this section.

Table 5. The Result of One Way ANOVA of EFL Teachers' TPACK based on Teaching Categories

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44.033	2	22.016	.226	.798
Within Groups	13233.708	136	97.307		
Total	13277.741	138			

The following analysis was executed to verify whether there was a significant difference in EFL teachers' TPACK based on gender. The result of group statistics in Table 6 shows that there was no valuable distinction between the mean scores of two groups. While the mean of female TPACK was 78.62, the mean result of male TPACK was 80. Subsequently, it can be seen in Table 7 that the significant level (Sig.) or the P-value was higher than .05 (>0.05). It can be drawn that there was no difference in TPACK between male and female English teachers. Gender was not counted as the dominant factors which differentiated EFL teachers' TPACK. Since the result show the insignificant result of TPACK according to gender, some analysis of TPACK domains and the measure effects size were not elaborated on this section.

Table 6. Group Statistics of EFL Teachers' TPACK Based on Gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TPACK Framework	Female	105	78,62	10,675	1,042
	Male	34	80,00	6,462	1,108

Table 7. Independent Sample Test of EFL Teachers' TPACK Based on Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TPACK	Equal variances assumed	2,911	,090	,712	137	,478	1,381	1,939	-2,453	5,215
	Equal variances not assumed			,908	93,837	,366	1,381	1,521	-1,639	4,401

DISCUSSION

The discussion of this study was split into several sections, mainly the ICT based learning system applied by EFL teachers amidst distance education, Indonesian EFL teachers' TPACK, and differences in TPACK perception among EFL teachers considering their teaching categories and gender.

The ICT based learning system applied by EFL teachers amidst the distance education

This study was intended to investigate the various kinds of ICT based learning system conducted by EFL teachers amidst the implementation of distance education. The findings denoted that Google Classroom, WhatsApp Messenger, and Zoom Video Communication served as the top three of ICT based learning system chosen by the EFL teachers. First, Google Classroom is a part of an ICT based learning system which aims at improving various teaching activities and situation conducted by teachers. By implementing Google Classroom, teachers can save their time, maintain the class to keep organized, and improve communication with students (Iftakhar, 2016). Similary, a study established by Harjanto and Sumarni (2019) discovered that teachers considered Google Classroom effective to enhance their teaching in terms of utility, ease of use, ease of learning, satisfaction, and students' experience. The study explained that Google Classroom became a source for teachers to document the materials, increase the collaborative learning between them and the students, accessible in any sort of gadget, and convenient for students.

Second, the use of WhatsApp Messenger offers instant access to online resources for both teachers and students. It covers some comprehensive learning media, namely pictures, videos, and voice notes which function as equipment for teaching and learning (Gon and Rawekar, 2017). The study employed by Kartal (2019) observed that WhatsApp Messenger greatly enhance students' autonomy, motivation, interaction, language skills (i.e. reading, writing, listening, speaking) and integrated skills. Alghamdy (2019) disclosed that EFL students were vibrant to join English through the application of WhatsApp Messenger since they could improve their academic achievement.

Ultimately, Zoom Video Communication is profitable learning media during distance learning, in which both teachers and students can held an online discussion (Laili and Nashir, 2020). A study conducted by Kim (2020) uncovered that Zoom Video Communication influences students' interests and motivation. In the study, it was reported that this learning media developed their self-directed learning and interaction. In addition, Gunawan et al. (2021) shared several advantages of employing Zoom Video Communication in online learning dealing with the audio and video features, the share screen features, the breakout rooms, the security, and the scheduling system. All these traits provides an interaction between students and teachers during the learning process. Teachers can present the learning materials virtually, and hold group discussions in that learning media.

Indonesian EFL Teachers' TPACK

This study reflected that Content Knowledge (CK) was apprehended as the dominant aspect among EFL teachers. They were confident in their skills related to the concepts, theories, ideas, language proficiency, and the fundamental materials of English. Meanwhile, the result of EFL teachers' Technological Pedagogical Content Knowledge (TPACK), Pedagogical Content Knowledge (PCK), Pedagogical Knowledge (PK), Technological Knowledge (TK), and Technological Pedagogical Knowledge (TPK) was regarded as the medium point. This finding corresponds to Muhaimin et al. (2020) unveiling that CK was announced as the strongest element of Indonesian Science teachers' TPACK. The study inferred that the teachers had

sufficient knowledge of science, and they were proficient in developing the fundamental content of science as well. Aligned with this, Fuad et al. (2020) also proved that CK and PK were the most prominent skill in Indonesian language teachers' TPACK. The study highlighted that the teachers were professionally able to create effective teaching materials, handle the classroom situation, and evaluate students' learning progress. Akturk & Saka Ozturk (2019) also shared the same finding as this study, in which, they reported that CK and PCK of secondary school teachers were higher compared to other TPACK elements.

However, TCK served as the least positive aspect compared to all the TPACK domains. There were still many EFL teachers who did not fully have exposure to the development of technology used and developed in the ELT field. They are less confident to make use the technology which made them understand the fundamental content of English. This result was in line with Viera et al. (2020) displaying that English instructor at the university level had limited reliance on their abilities to integrate the technology into their teaching. Agustini et al. (2019) also verified that teachers who graduated from Education technology had their TCK level as average. The study showed that they used ICT learning resources as administrative needs. On the contrary, Lavidas et al. (2021) disclosed that Greek in-service teachers showed their positive responses toward TPACK framework, mainly in TCK domain. Another similar study from Greece, Roussinos & Jimoyiannis (2019) found that primary education teachers had higher level in all technological domains of TPACK framework, including TCK. The study mentioned that teachers who joined the national teacher training program gained significant higher level of technological domains (TK, TCK, TPK, and TPACK).

Difference in TPACK in accordance to EFL Teachers' Demographic Information

This study also intended to investigate different perceptions among EFL teachers' TPACK based on the teaching categories and gender. Regarding the three categories of teaching, it can be concluded that there was no significant difference in TPACK among EFL teachers from junior high schools, senior high schools and vocational high schools. This finding might arise since EFL teachers from different level of teaching today have various access to ICT which support their pedagogies. Difficulties in adapting materials, activities, and methods into their online classroom are not the barriers anymore since they are quite familiar with the development of ICT and how to integrate it in their teaching environments. This finding is supported by Mailizar et al. (2021) disclosing that there was no significant difference in TPACK between teachers from lower secondary level and upper secondary level. On the contrary, Resbiantoro (2016) investigated that junior high school pre-service teachers had higher self-efficacy in terms of Content Knowledge (CK) and Technological Pedagogical Knowledge (TPACK) domain compared to senior high school teachers and vocational high school teachers. The study added senior high school teachers and vocational high school teachers less confident towards the teaching materials since they considered it more difficult. Besides, the teachers also felt doubt to explore their knowledge of the TPACK framework.

In addition, female and male EFL teachers in this study apparently did not highly differ in the extent of the use of ICT during the instruction process. Thus, The TPACK framework between them seemed to be equally fair. This result may speculate that the gap of ICT comprehension between females and males is narrowing (Astuti et al., 2019). They have the same opportunity to learn the content, approaches, and technology in their teaching area. They also might have the same level of confidence about the application of ICT into their teaching. This finding is in contrast to Alharbi (2020) revealing that there were differences in TPACK achievement regarding gender. Female teachers achieve a higher level of PK and TK than male teachers who only attained better in CK. A study conducted by Latif et al. (2019) also reported that male teachers were more proficient in the matter of employing ICT than female ones. Nevertheless, the result of this study regarding gender is supported by various studies which also arise issues of gender within teachers' ICT competences (Cahyani et al., 2021; Loi, 2021; Makawawa et al, 2020; Akturk & Saka Ozturk, 2019; Astuti et al., 2019).

CONCLUSIONS

This study was in an attempt to explore EFL teachers' TPACK amidst distance education. The findings are divided into three parts. First, the data noted that Google Classroom, WhatsApp Messenger, and Zoom Video Communication were the most salient ICT based learning system chosen by the EFL teachers. Second, the analysis exhibited the the average EFL teachers' TPACK result was fair. They were confident in their comprehension of theory, concepts, practices, English content and pedagogies. The also felt quite confident about their ICT skills. The analysis of TPACK illustrated that CK was perceived as the most striking aspect, while TK, PK, TPK, and TPACK were considered as the decent aspect in EFL teachers' TPACK. Nevertheless, it turned out that TCK became the least favourable aspect compared to all the domains of TPACK in the questionnaire data. EFL teachers. Second, it was noted that there was no significant difference in TPACK perception among EFL teachers from junior high schools, senior high schools, and vocational high schools. This phenomena might be encountered since teachers presently can easily access and understand various kinds of ICT for the needs of learning and teaching. They even have no difficulty in incorporating the ICT into the instruction process since they are already familiar with its attributes. Eventually, gender was not counted as the main factor that differed EFL teachers' TPACK. The data of this study disclosed that the ICT gap within gender is narrowing. Female teachers and male teachers equally deserve to learn and access the fundamental materials and the teaching methodologies in the ICT that they are using in the subject area.

Reflecting on the whole result and conclusion of this study, some recommendations are suggested for EFL teachers, stakeholders, and forthcoming researchers. As for EFL teachers, it is suggested for them to optimize their ICT knowledge during the teaching process, especially in the area of Technological Content Knowledge (TCK). It would be better if they show their confidence in the use of ICT by getting involved in professional development activities such as joining teacher training, or collaborating with universities. Meanwhile, teachers should also be exposed to the development of research in the area of ELT since academic research potentially helps them find out what need to be improved in their classroom. Thereafter, it is suggested that the stakeholders (i.e. instruction developer, and English department and education providers) hold teacher training, seminar, and conference related to issues of technology in this current landscape of education so that the teacher themselves can keep up with the development of ICT. Finally, the forthcoming studies should explore more about issues of ICT in education in a broader population so that a comprehensive generalization can be analysed. Besides, more studies on TPACK are also worthwhile to examine by using different kinds of instrument such as lesson plans, observations, or syllabi so that new findings of TPACK can be developed.

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