



# The Challenge of EFL Teachers in Technology-Integrated Learning in the Society 5.0

Windra Irdianto<sup>1</sup>(✉), Irina N. Lazareva<sup>1</sup>, and Rahmati Putri Yaniafari<sup>2</sup>

<sup>1</sup> Far Eastern Federal University, Vladivostok, Russia  
irdianto.vi@dvfu.ru

<sup>2</sup> Universitas Negeri Malang, Malang, Indonesia

**Abstract.** The main component of Society 5.0 is humans who can solve many social challenges and problems by utilizing various technologies which are existing in the Industrial Revolution 4.0. In the era of Society 5.0, education has an important role to advance the quality of human resources. Therefore, education skills for 21<sup>st</sup> century is needed, where digital literacy is one of the basic competencies that must be possessed. The global pandemic has accelerated the use of media in education, such as finding lesson information, learning materials, exercises, and others. Digital platforms are currently the most appropriate means and continue to support learning activities. Against this background the use of various digital platforms requires more insight from teachers. The unexpected shift in teaching English as a Foreign Language (EFL) from traditional classroom interactions to online learning activities has generated several challenges for practitioners and education coordinators. This literature survey was conducted to provide an overview of the challenges faced by EFL teachers in various countries. Special consideration has been given to barriers for successful formation of digital competency. For this purpose, the methods of theoretical analysis and generalization of national and international studies were used. The data was collected from the contributions published between 2020 and 2022 in various academic journal databases. Current approaches to define the digital competence helped to make it more precise. The results are stated as eligibility criteria and the inventory of acute problems faced by EFL teachers which directs the concerned persons to be further sources of information.

**Keywords:** digital learning · English as a foreign language · digital competence · society 5.0

## 1 Introduction

Society 5.0 is a concept introduced by the Japanese government in 2016. This concept was created to anticipate the rapid development of Information and Communication Technology. The aim of Society 5.0 is to create a society in which people enjoy life to the fullest. Its main objective is economic growth and technological development, and not for the prosperity of some people only [1].

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Another meaning of Society 5.0 is the concept of a society that is human-centred and technology-based. There are two things that must be prepared in facing the era of society, adaptation and competence. Education has a major role to play in improving competent human resources. Competent human resources in Society 5.0 are humans who have data literacy: the ability to analyze, read, and use big data in the digital world. Then technological literacy, such as technology applications (engineering principles, biotech, artificial intelligence, machine learning, coding), and understanding how machines work. Educators in society 5.0 must have 21<sup>st</sup> century life skills, one of which is digital literacy. While the focus of 21<sup>st</sup> century educational expertise is currently known as the 4Cs which include communication, critical thinking, collaboration, and creativity [2].

The global pandemic that occurred around the world in 2020 accelerated the application of the Society 5.0 concept. Most countries affected by this infectious disease which apply social distancing as a control measure to avoid disease transmission. As a result, people are encouraged to carry out their activities from homes such as study and work by utilizing technology. In Indonesia, the global pandemic has greatly affected the education system, where the government has set a public policy to temporarily replace conventional learning in formal classes to online learning outside the classroom, including teaching English as a foreign language (EFL).

This change in the learning process has led to several consequences. (1) Changes occur suddenly because they cannot be predicted in advance. (2) Students and teachers must adapt to some changes in their learning and teaching activities, such as the use of gadget, assessing students' work online and designing online learning materials [3]. Therefore, it is necessary to review some of the challenges of EFL teachers in various countries.

## **2 Recent Studies on EFL Teachers' Challenges in Technology Integrated Learning**

In the process of identifying relevant studies, searching for articles, conference papers and theses is done through several research databases, which are Cyberleninka, Education Resources Information Centre (ERIC), Taylor & Francis Online, Google Scholar, Springer Link, and Directory of Open Access Journal (DOAJ). Some of the search terms used included "Society 5.0", "Challenges for Teachers", "Technology integration in education", combined with "Digital literacy" and "EFL". To obtain the most recent studies, the articles searched were filtered to articles published from 2018 to 2022. The following eligibility criteria were also set based on the research questions.

1. This paper aims to identify various problems faced by teachers in using technology in learning
2. This paper is written in English
3. This paper was conducted in the EFL subject

A preliminary search (See Fig. 1) through the research database revealed a large number of papers ( $n = 112$ ). However, after the screening process, most of the articles

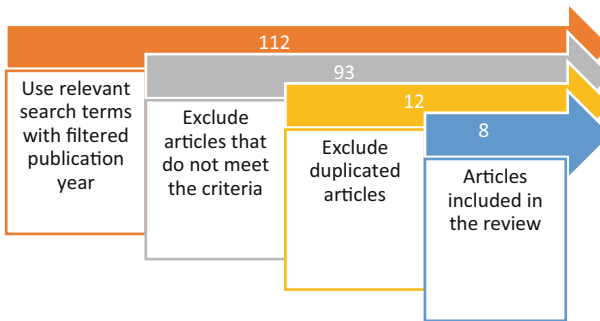
**Table 1.** Summary of the Studies

No.	Author	Year	Research Subject	Country	The Focus of the Investigation
1	Shiva Khatoony, Maeda Nezhadmehr	2020	Iranian English Teacher in School	Iran	Exploring the challenges of ELT teachers in technology integration for online classrooms
2	Badia Hakim	2020	University English instructors from 7 countries	Saudi Arabia	Investigate the challenges faced by EFL teachers teaching technology-based online classrooms and the impact of technology on online EFL classrooms
3	Travis Cote, Brett Milliner	2022	University English Teachers from 16 Countries	Japan	Measure the digital literacy level of teachers in their English program
4	Le Thi Mai	2020	EFL teachers teaching English at schools	Vietnam	Explore the challenges and benefits of integrating Information and Communication Technology in EFL Teaching and Learning Activities
5	Bingqing Li	2022	EFL teachers teaching English at schools	China	Understand the readiness of a group of EFL teachers in mainland China for distance teaching
6	Okan Onalan, Gökçe Kurt	2020	Novice teachers in the context of EFL	Turkey	Expressing EFL Guru Turkey's perception of technology integration
7	Meirbekov A.K., Begaidarova A.E.	2021	English Teacher in secondary School	Kazakhstan	Identifying teacher barriers in teaching foreign languages in secondary schools

*(continued)*

**Table 1.** (continued)

No.	Author	Year	Research Subject	Country	The Focus of the Investigation
8	Arif Nugroho, Dwi Ilmiani, Agnira Rekha	2020	University English instructors	Indonesia	Explored university EFL teachers' insights and challenges of online teaching activities



**Fig. 1.** The Process of Articles Identification

were excluded because they were not eligible. The article identification process resulted in 8 eligible articles.

The study on the challenges of EFL teachers in technology-integrated learning was carried out at various levels of education (elementary, secondary, higher). Out of the 7 studies, 2 investigated the challenges of EFL teachers in universities and 5 investigated the challenges of teachers in schools. Table 1 shows the details of the research summary.

### 3 Results and Discussion

From the 8 articles selected for review, all of them used the same research instrument, which used questionnaires and interviews. Only one uses other instruments in the form of observation and documentation. Based on the results of research conducted by: 1) Shiva Khatoony and Maeda Nezhadmehr, in 2020; 2) Badia Hakim, in 2020; 3) Travis Cote and Brett Milliner, in 2022; 4) Le Thi Mai, in 2020; 5) Bingqing Li, in 2022; 6) Okan Onalan, Gökçe Kurt, in 2020; 7) Meirbekov A.K., Begaidarova A.E., in 2021; and 8) Arif Nugroho, Dwi Ilmiani, Agnira Rekha, in 2020, the following results were obtained.

#### 3.1 Study by Shiva Khatoony, Iran

The results of the study concluded that teachers have a positive response and like to teach English using technology and the internet. They believe that having online class

is better than not having online class. This helps students to get more information they need to study. Regarding the experience of integrating technology in learning, the teacher felt challenged at the beginning. In addition, the results of the interviews revealed that teachers have different challenges in implementing online classes. They need fast internet facilities; in Iran this is a major problem. Several teachers revealed that technology training would be very helpful in supporting the implementation of technology integration for online classrooms [4].

### **3.2 Study by *Badia Hakim, Saudi Arabia***

The research findings indicate that the majority of teachers have positive responses to the integration of technology in learning. They also reveal the fact that having online technology-based classes is advantageous. Technology-integrated online EFL classes have proven to be able to provide students the opportunity to engage in remote learning, in their comfort zone. Other findings also reveal the challenges teachers face in integrating technology in EFL online classrooms, such as internet signal strength, connectivity, LMS attendance link issues, and appropriate assessment tools. The findings also reveal that teachers expect advanced training and professional development courses on the effective and integrated use of technology, using certain applications in their online teaching [5].

### **3.3 Study by *Travis Cote, Japan***

From the research findings, it was revealed that EFL Language Teachers have a high level of digital proficiency, they are aware that digital literacy contributes to their profession. Most teachers are willing to develop their understanding and self-control over the use of digital devices. They continue to learn to develop their digital literacy to this day. And they choose to study independently rather than attend formal training. However, behind their digital proficiency, several areas were found that showed teachers had limited experience, which were online discussion, online video conferencing, website design, database management, blogging applications, cloud computing, and mobile or computer games. Another study revealed that teachers need further development regarding voice recording and editing, managing databases, creating spreadsheets, and designing websites [6].

### **3.4 Study by *Le Thi Mai, Vietnam***

The research findings reveal that teachers in Vietnam do not have sufficient resources to obtain information and knowledge about integrating ICT in teaching. Vietnamese teachers rarely receive official training on the integration of ICT in language teaching and learning. This leaves them feeling clueless about how to integrate ICT in the right way. Other research findings reveal that most teachers state that lack of time is a barrier to integrating ICT in the classroom. They feel they do not have enough time to design and integrate ICT into lessons because they are busy to meet the achievement targets of the syllabus [7].

### **3.5 Study by Bingqing Li, China**

The results of the study found that secondary school EFL teachers gave an overall positive response to ICT. Teachers stated that they were quite ready for the integration of ICT into learning. EFL middle school teacher in China generally perceive ICT use as easy and they are confident in using technology tools. However, on the other hand, teachers find many problems in implementing innovative teaching. They feel confident in using technology but not confident in integrating ICT in learning and teaching, they tend to use ICT mostly limited to blended learning rather than fully online learning [8].

### **3.6 Study by Okan Onalan, Gökçe Kurt, Türkiye**

The findings reveal that teachers feel confident in adopting this technology for teaching purposes. However, the support is very limited in terms of administration, technical and adequacy of facilities. They noted that adequate technology needs to be provided, along with administrative and technical support and ongoing training specifically designed to meet their identified needs in technology use and integration [9].

### **3.7 Study by Meirbekov a.K., Kazakhstan**

The study findings state that the use of ICT in foreign language teaching plays an important role. The results of the study state that teaching methods that use technology are more effective in attracting students' interest. For this reason, teachers must continuously improve their professional skills, especially in ICT. On the other hand, the findings of this study reveal that teachers are not equipped with proper facilities to support the integration of technology in learning. As revealed from the research findings, that teachers still use a limited number of interactive whiteboards and language classes are not fully set up for learning foreign languages [10].

### **3.8 Study by Nugroho, Indonesia**

The findings of the study conducted by Nugroho revealed that the absence of an e-learning platform and the time consuming to prepare online learning materials were challenges for teachers. In addition, the lack of motivation and involvement of students in online learning is also a major challenge for teachers. While in technical terms they face some unstable internet connection problems. Nugroho believes that the need for a professional development program on ICT integration is very necessary and also the development of a representative e-learning platform to carry out online learning activities [11].

From the findings of the study of 8 reviewed articles, it was revealed that EFL teachers had a positive response to the integration of technology in learning. They argue that having an online class that is integrated with technology really helps students get information wherever they are. The results of the review of 8 articles also reveal the challenges faced by teachers in the Society 5.0 era. The first challenge is the lack of professional development programs on technology integration. The urgency of this professional development program has only been felt by teachers for the past 2 years, due to the Pandemic. The global pandemic has indirectly introduced the concept of Society

5.0 to the whole world. The pandemic is the main reason for teachers to urge the need for technology integration, not because they are facing Society 5.0. And until now there are still many teachers who do not have sufficient knowledge and skills to face Society 5.0 [12].

The second challenge is related to facilities. For some countries, facilities are the main problem for the smooth implementation of technology-integrated learning. The speed and affordability of the internet is very influential in supporting the implementation of online learning. In addition, gadgets to support learning activities are still considered expensive items, as revealed by Gurung in his research that the most important challenge faced by teachers in online teaching is reaching/teaching students in remote areas due to the unavailability of strength internet access, lack of sustainable electricity supply, lack of sources of income for parents who cannot afford laptops or android phones for their children [13]. Other findings were also stated by Tuzahra, the quality of the internet network and the lack of technological knowledge can make it difficult for EFL teachers to integrate technology into learning. Tuzahra also believes that the concept of literacy in the program should be prioritized, such as basic literacy, library literacy, media literacy, technological literacy, and visual literacy [14].

The third challenge based on the results of the review revealed that teachers feel they do not have the confidence to use technology in learning. Based on the results of the OECD survey, the percentage of teachers over 50 years old reached 37.8% [15]. This can be interpreted that currently teachers are still mostly filled by the Baby Boomer generation and the early X generation. Which, this generation is those who have to adapt to technology, because boomers are not born into technology [16]. They are resistance to change. According to Gupta, teachers feel comfortable and accustomed to traditional teaching methods and therefore resist change and move out of their comfort zone. In addition, students know more than teachers. Teachers feel insecure and afraid of their potential related to less technological knowledge compared to their students. This is because students are currently dominated by Generation Z and Alpha. Generation Z was born in a digital world (born after 1995), this generation grew up with direct access to the internet and social media [17]. While the Alpha generation are children born in 2010–2025. Generally, the characteristics of this generation master technology and alpha generation children use technology to play and learn [18]. And teachers have a fear of the unknown with new technology. They are afraid to experiment with new technology [19].

The fourth challenge is that teachers must be able to utilize/make representative e-learning and this takes a lot of time. E-learning is the administration and delivery of supporting learning materials over a network using devices, and web-based technologies to improve individual performance and development. The success of e-learning implementation is influenced by 5 factors, which are analysis, design, development, implementation, and evaluation. For this reason, preparing e-learning requires relatively more time [20].

Technology can be used to help the learning process, however, it cannot replace the role of the teacher. As Danilova stated, digitization is just a global trend that digitizes information, services and activities, digitization has no special potential to improve language learning. Mobile phones and computers are digital instruments that will not

replace teachers and do not have the ability to teach languages more successfully, because any gadget is just a new tool that offers useful conveniences in learning and teaching languages [21].

## 4 Conclusion

From the results of the review, it can be concluded that EFL teachers who teach at elementary, middle, and high levels still expect professional training on the integration of technology in learning, even though teachers who work in Japan as a country that issued the concept of Society 5.0. Technologically, teachers in Japan are at an advanced level, but they still need more specific training, which is carried out independently. The teachers also stated that, facilities are also a major challenge, especially in terms of internet access and the quantity and quality of gadgets. Teachers feel insecure because of generational differences, where teachers think students know more about technology than they do. Representative e-learning is another challenge for teachers, because in its implementation, e-learning requires a long and time-consuming process.

Thus, professional training on the integration of technology in learning needs to be carried out intensively. Through training, teachers will know various kinds of learning applications as alternatives to support learning. With the training will improve the skills of teachers in making e-learning interesting and interactive. For educational institutions, it would be better to add human resources by recruiting experts in the field of technology. This is intended so that teachers are helped if they get problems related to problematic technology devices.

Despite the convincing results, this literature review acknowledges that the EFL teacher's perception about the challenges in technology-integrated learning, in society 5.0 that has been described does not represent the whole view of EFL teachers in the world.

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