

ENHANCING ENGLISH LANGUAGE TEACHING BY IMPLEMENTING ICT AS AN EDUCATIONAL TOOL

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ABSTRACT

In light of the progressive adoption of Information and Communication Technology (ICT), 21st-century teachers are expected to integrate technology into language teaching in the classroom successfully. In Malaysia, a computer education programme was introduced in 1999. Even though it was started about two decades ago, the actual implementation status is quite different from the adoption and initiatives were taken to integrate ICT in language classrooms, especially in English Language Teaching (ELT). It is not satisfactory and the traditional teaching method seems not to fit anymore with the current era. Hence, this paper proposes a framework of theory and concepts for implementing ICT as an educational technological tool to enhance secondary school students' English language teaching. In this fourth Industrial Revolution (IR), teachers need to dominate the ICT as the new students from the Z and Alpha Generation tend to utilize technology-based learning. It is hoped that this implementation of ICT as an educational technological tool will improve the secondary school students' English language and subsequently help students obtain the best result in the English language by providing more guided references and learning experiences.

Keywords: ICT, ELT, educational technological tool, secondary school students' English language teaching

INTRODUCTION

The recent development of technology has enormously changed people's lives as the world progress into technology in a more advanced age. The global adoption of Information and Communications Technology (ICT) into the educational field has attracted many concerns. This trend is predominantly influenced by the luminescence of the Industrial Revolution 4.0 (IR4.0). Here in Malaysia, ICT has become a significant domain in teaching and learning. Even the technology is interactive, but it is still low in the usage of language classrooms (Alkamel and Chouthaiwale, 2018). Teachers do not show tremendous interest in implementing ICT to improve the effectiveness of education at informal and formal levels in English Language Teaching (ELT). With its numerous tools, ICT has immense potential to enhance the students' English language learning. Implementing ICT as an educational technological tool in ELT is one of the ways to enhance the students' English learning practice compared to the traditional method, chalk and talk teaching method. However, since the global community was hit hard by the worldwide pandemic caused by the Coronavirus (COVID-19) disease in 2020, the whole world has come to a halt (Samiri, 2021). In such unprecedented times, teachers were faced with the necessity of migrating to online teaching. The sudden shift to entire online teaching and learning required teachers and students to adapt to new situations. Even though before this ICT was already implemented in the teaching and learning process, it was not on a massive-scale. At present, the ubiquity and availability of ICT have enabled teachers to adopt ICT as an integral part of their daily teaching practices during online classes. Thus, ICT implementation has been regarded as a major. Therefore, this is the perfect time for the teachers to implement ICT as an educational technological tool in the teaching process, mainly in ELT for the secondary school students on a massive-scale, as it can provide many opportunities for effective teaching which could help students be more active in lessons (Kee et al., 2021).

The rationale of implementing ICT in ELT is that secondary school students can enhance their English language in more accessible way as traditional teaching methods do not significantly impact the

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students. In addition, there are still many students out there who did not perform in their English language. Students must master the English language because of its essential role as the language of international communication and the most common second language in the world. In the Malaysian context, mastering the English language can help them to achieve an excellent grade in Sijil Pelajaran Malaysia (SPM), Malaysian University English Test (MUET) also as a preparation to further their study at the tertiary level which most communication and reference material are mainly in the English language. Therefore, teachers need to equip the secondary school students with a high level in all four basic English skills such as listening, speaking, reading and writing. Using the English language across the curriculum is vital to provide an English-speaking environment (Ting et al., 2017).

TPACK in ELT

The reality shows that many teachers still have not implemented technology in the learning process in the classroom. Teachers are yet preoccupied with the classical or conventional teaching in delivering learning material as if they are less willing to get out of comfort zones that demand to continue to innovate and update information (Agustini et al., 2019). The development of teaching by implementing ICT can contribute significantly to the level of pedagogical practices of students. Based on the previous research, the success of 21st-century learning involves understanding the content or material, teaching methods and utilizing information technology integrated. Therefore, the idea of Technological Pedagogical and Content Knowledge (TPACK) (Figure 1) has a close relationship with increasing creativity and collaboration in learning and it is a framework for integrating technology in teaching. TPACK was introduced by Punya Mishra and Matthew J. Koehler (Mishra & Koehler, 2006).

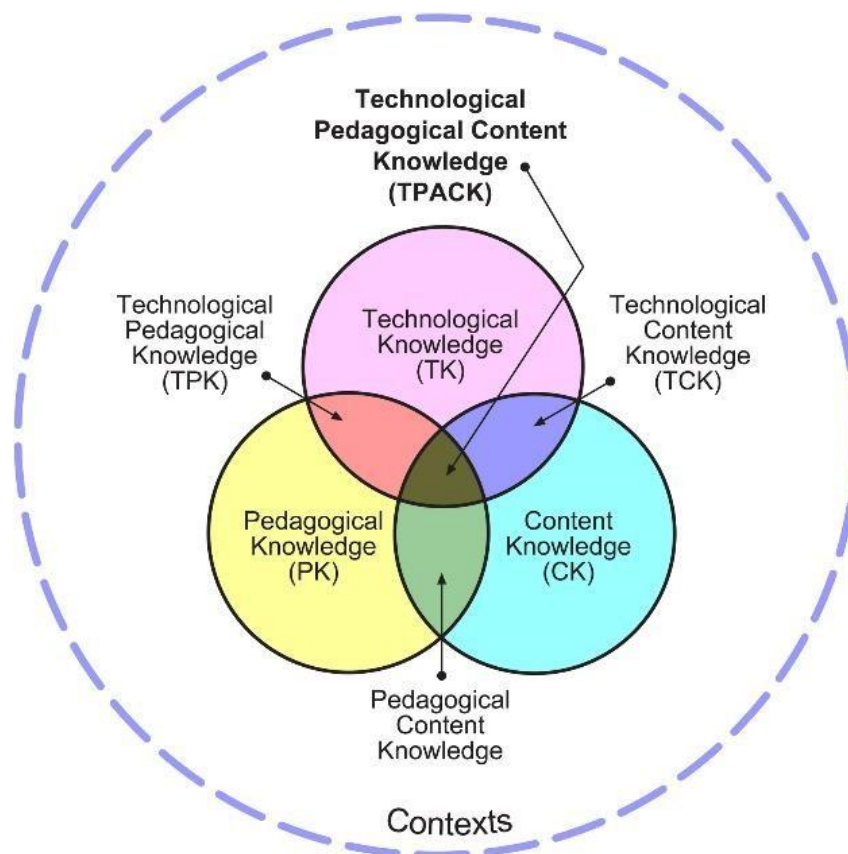


Figure 1. TPACK framework.

This model is built upon Shulman's (1986, 1987) theory of teacher knowledge, where teacher knowledge encompasses many categories of specific teacher knowledge (for example, pedagogical content knowledge, learners' knowledge and their characteristics and knowledge of educational contexts). There is three fundamental knowledge in TPACK, which are technological knowledge (TK), pedagogical knowledge (PK) and content knowledge (CK). There are interactions between each of these two pieces of knowledge and among all these knowledges. TK includes understanding how to use computer software and hardware and other technologies in education. Besides, TK covers the ability to adapt and learn new technologies. This capability needs to be included because of the ongoing developments and technological changes. For example, the development of computers is constantly changing until the current notebook available today. Meanwhile, PK is a common goal of the specificity of knowledge to teach. It is a collection of skills that a teacher must develop in order to be able to manage and design teaching and learning activities to achieve the expected learning goals. Also, PK describes the knowledge of different teaching methods, including knowing how to create classroom activities. CK, on the other hand, leads to knowledge or specificity of disciplines or subject matter. CK is different at each level, for instance, the differences in primary level and secondary level. In order to teach the students, teachers are expected to master this knowledge. CK is also important as it determines the specificity of thinking from specific disciplines in each study. Therefore, the TPACK framework can help teachers implement ICT in ELT effectively as teaching by combining technology and pedagogical techniques can construct new apprehension from the existing knowledge among students (Elas, 2019).

Student Learning for English Language

Malaysian Education Blueprint 2013-2025 (Preschool to Post-Secondary Education) stated that the Ministry of Education (MoE) aims to develop proficient students in both Bahasa Malaysia and the English language. Since Bahasa Malaysia is widely spoken by all Malaysians, Chinese, Indians and other ethnic minorities, it will not be a problem. However, compared to Bahasa Malaysia, Malaysian students' performance in the English language is weaker. Data from the examination syndicate (Figure 2) showed that students who achieved at least a credit in English Cambridge 1119 in 2010 only 23% Bumiputera, 42% Chinese, and 35% Indian. All three major ethnic groups fall significantly short of the 70% proficiency target. In addition, English language results are also the lowest of the core subjects at the SPM level. (MoE, 2013, p.114). Therefore, in line with the ongoing initiatives to improve students' English proficiency, the English language subject paper should be made compulsory to pass in SPM.

English and Bahasa Malaysia performance (2010 and aspiration for 2025)

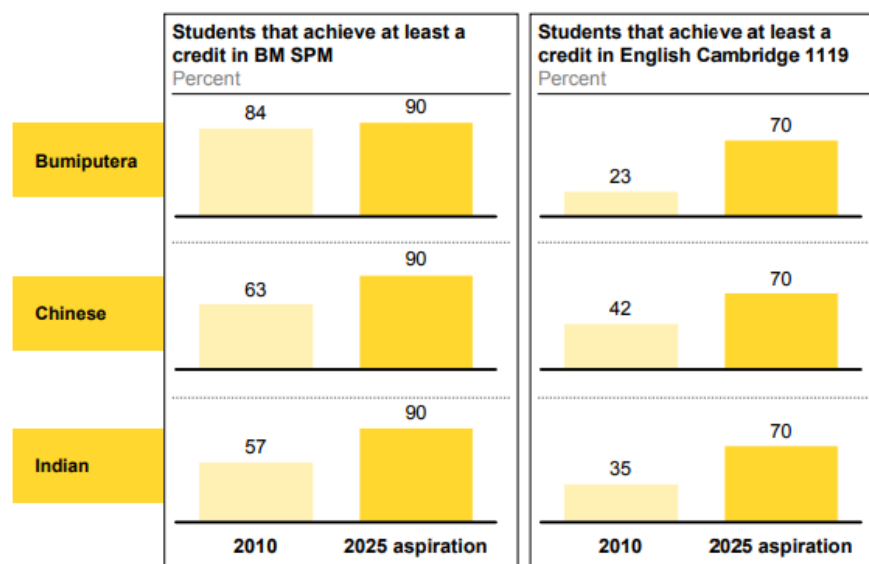


Figure 2. Data of English and Bahasa Malaysia performance (2010 and aspiration for 2025; adopted from MoE)

As stated by (Adan and Hashim, 2021), English as a Second Language (ESL) learning has become a rising issue in the Malaysian Education System. In most developed countries like Malaysia, English has become the second language that needs to be taught since preschool. This will make the country well-positioned to develop a nation of people who are at least “operationally proficient” in more than one language. The Common European Framework of Reference for Languages (CEFR) defines operational proficiency as the linguistic fluency required to participate fully in professional and academic life (MoE, 2013, p.113). In addition, ELT towards the secondary school students needs to be emphasised as learning and acquiring the English language will provide the students with a more significant opportunity for good education and a successful career. Besides, the English language also functions as the medium for all aspects of living, such as globalization, education, career, travel, culture and even technologies (Kapra, 2019).

Table 1. The description of Common European Framework of Reference for Languages (CEFR).

CEFR Description		
BASIC USER	A1	Able to use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Able to introduce himself/herself and others, and can ask and answer questions about personal details such as where he/she lives, people he/she knows, and things he/she has. Able to interact in a simple way provided the other person talks slowly and clearly and is prepared to help.
	A2	Able to understand sentences and frequently used expressions related to areas of most immediate relevance (e.g., very basic personal and family information, shopping, local geography, employment). Able to communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Able to describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
INDEPENDENT USER	B1	Able to understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Able to deal with most situations likely to arise whilst travelling in an area where the language is spoken. Able to produce simple connected text on topics which are familiar or of personal interest. Able to describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.
	B2	Able to understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Able to interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Able to produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
PROFICIENT USER	C1	Able to understand a wide range of demanding, longer texts, and recognise implicit meaning. Able to express himself/herself fluently and spontaneously without much obvious searching for expressions. Able to use language flexibly and effectively for social, academic, and professional purposes. Able to produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors, and cohesive devices.
	C2	Able to understand with ease virtually everything heard or read. Able to summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Able to express himself/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in the most complex situations.

ICT in Education

ICT has brought a great revolution in the education sector in Malaysia. As technology develops rapidly, leveraging technology to scale up learning quality becomes one of the critical elements devised in Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education). As mentioned in Chapter 6: ICT for Learning, three waves are comprised in this section (Table 2). Wave 1 (2013 - 2015): Enhancing the Foundation, Wave 2 (2016 - 2020): Introducing ICT and Wave 3 (2021 - 2025): Maintaining Innovative, system-wide usage. Since entering Wave 3 (2021 - 2025), ICT should be fully embedded throughout the pedagogy and curriculum of the education system. The Ministry will focus on augmenting and intensifying ICT usage among students and teachers. This will bring the device to student ratio in line with leading countries, besides continuing to expand efforts around distance and self-paced learning and curriculum of the education system (MoE, 2013, p.180).

Table 2. Three waves in leveraging ICT in education by MoE (Adopted from MoE)

Wave	Focus	Descriptions
Wave 1 (2013 - 2015)	Enhancing the foundation	• Ensuring students and teachers have sufficient access to ICT devices; • Providing the education system with a learning platform and sufficient network bandwidth to use ICT services; • Ensuring that all teachers have basic competency in ICT; • Integrating ICT into curriculum and management.
Wave 2 (2016 - 2020)	Introducing ICT innovations	• Transforming ICT usage in the classroom; Exploring ICT solutions for specific groups (under-enrolled, rural schools, gifted student); • Reviewing best practices for the system by adopting outcome-based assessment; • Achieving a critical mass in ICT devices.
Wave 3 (2021 - 2025)	Maintaining innovative, system-wide usage	• ICT fully embedded in pedagogy and curriculum; Intense ICT usage among students and teachers; • Expanding the efforts on distance and self-paced learning and curriculum.

In order to strive for the government's agenda as proposed in Wave 3 that starting from this year, ICT should be fully implemented in the teaching and learning process. Teaching the English language by implementing ICT has a high potential to enhance the depth and improve the overall quality of English. In addition, it can help students foster higher-order thinking skills and make the lessons more interactive and livelier, promoting teacher-student and student-student interaction, which helps students develop their proficiency levels (Khan and Kuddus, 2020). Even though Malaysia has introduced ICT in education since the late 90s, there is still a lack of realistic ICT implementation scenarios for massive-scale pedagogy in regular schooling, even in the 21st century. That is why implementing ICT at school should be on a massive-scale in order to fit the students and teachers with the current trend and prepare themselves with knowledge and skills in technology to meet the challenges of IR 4.0. Therefore, the role of teachers is vital because the teaching method depends on the teachers themselves. They have to reform their teaching styles and redesign the instruction based on the appropriate theories of learning and development to fill the needs of secondary school students nowadays. It is about time for teachers to consider implementing more current ICT tools in their teaching methodology. They need to gain ICT knowledge and skills by adapting to the freshest innovations in the teaching process to create more skilled, talented, creative and innovative lessons to attract students

engaging more in learning the English language, aligned with the outlines by IR 4.0. Implementing ICT in ELT can help the teachers enhance secondary school students' English due to its suitability for the Z and Alpha Generation students regardless of their learning style, whether visual, auditory or kinesthetic students. The MoE explores more ICT models to bring more effective English instruction to students, notably in this IR 4.0 era. ICT solutions have the dual advantage of offering personalised learning customised to individual needs and being quickly scalable. One such model is the blended learning model, which integrates face-to-face and technology-mediated instructional approaches in the classroom. Besides, self-directed online learning and interactive online tutoring also being adopted in the teaching and learning experience (MoE, 2013, p.117).

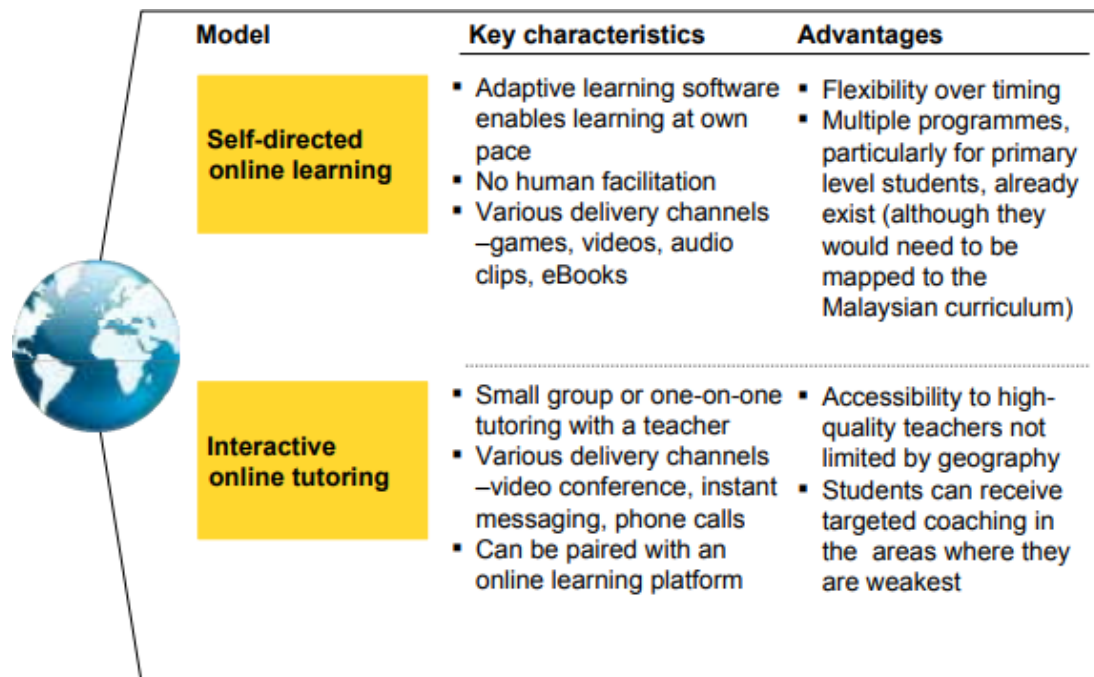


Figure 3. ICT models under consideration for English instruction (Adopted from MoE)

Implementing ICT in ELT in IR 4.0

The Internet of Things (IoT), Artificial Intelligence (AI), Augmented Reality (AR) or Virtual Reality (VR) term is not a new word in today's world. Since the world has entered the fourth IR era, it has focused heavily on interconnectivity, automation, machine learning and real-time data (Delipiter, 2019). It is transforming almost every aspect of daily lives, including the education process and progress into new computer-based learning methods, more generally smart-class products. This quick revolution in innovation has delivered another education model for the future, namely Education 4.0. Education 4.0 focuses on educational development and skill, making future learning more customized, hyper, intelligent, portable, worldwide and virtual. Therefore, Education 4.0 responds to the need for IR 4.0 (Hussin, 2018), whereas the new vision of learning promotes students to learn the necessary skills and knowledge and identify the source to learn all these skills and knowledge. According to Fisk (2017), there are nine trends related to Education 4.0. First, E-Learning tools offer an excellent opportunity for remote, self-paced learning. Flipped classroom approach also plays a significant role as it allows interactive learning to be done in class and outside the class time. Second, learning will be personalized based on the students. More complex tasks will be introduced to the students only after they have achieved a certain mastery level and more practices will be given if there is a need. Third, students have choices in deciding how they want to learn. Students are free to choose the learning tools or techniques that they feel are necessary, despite the course's learning outcomes being preset by the institutions in charge of the curriculum. Besides, blended learning, flipped classroom and Bring Your Own Device (BYOD) approaches can be adapted to enable students to be inventive in their learning experience.

Fourth, students will be introduced to more project-based learning. For example, students are required to apply the knowledge and skills they have learned to accomplish short-term projects. They should already get acquainted with project-based learning since high school. This learning method can train their organizational, collaborative and time management skills, which are helpful in their future academic careers. Fifth, students will be exposed more to field experiences such as mentoring projects, collaborative projects and internships. The advancement of technology effectively enables the learning of particular domains, making more space for acquiring skills involving face-to-face interaction and human knowledge. Sixth, students will be exposed to data interpretation that requires them to apply their theoretical knowledge to numbers and reasoning skills to make inferences based on logic and trends from given data sets. The manual part of mathematical literacy will become irrelevant as computers predict future trends. Seventh, students will be assessed differently and the conventional platforms to assess students may become irrelevant. Students' factual knowledge can be evaluated during the learning process. Meanwhile, the application of the knowledge can be tested when they are working on their projects. Eighth, students' viewpoints will be considered in designing and updating the curriculum. Students' critical inputs can aid the curriculum designers to maintain curriculum contemporariness, up-to-date and usefulness in which it is only realistic when professionals and 'youngsters' are involved. Lastly, mentoring will become more critical; thus, teachers will serve as facilitators to guide the students through their learning process.

Consequently, teachers must have the expertise to implement ICT for massive-scale in their teaching align with the IR 4.0 trends to make the teaching process more appealing to new millennials as the traditional method of teaching has no longer seen as adequate to fulfil the demand of the current generation. Figure 4 shows the principles of IR 4.0 by Herman et al. (2015). These principles should be taken into consideration when designing instruction. An agile instructional design model for design, development, and modelling of a personalized learning environment in education, namely the UDin model, is presented in Figure 5 (Din, 2020; Shahrul et al. 2021). According to Din, the UDin model, which is a 20-year transformation model of the design, development and modeling of a learning system, added the taken-for-granted Learning Outcome component and values in education aside from the learning theories, strategies, pedagogical and content knowledge as elaborated in the TPACK model (Mishra & Koehler, 2006). These are aligned with the Assessment component and both are placed in the center as the innermost part of the model labeled Learning Outcome and Assessment (Din, 2020; Shahrul et al. 2021). The model emphasizes continuous assessment. Din's previous work discusses the assessment method and tools in detail. Figure 6 shows the overall proposed conceptual framework suggested for the study of English language teaching by implementing ICT as an educational technological tool

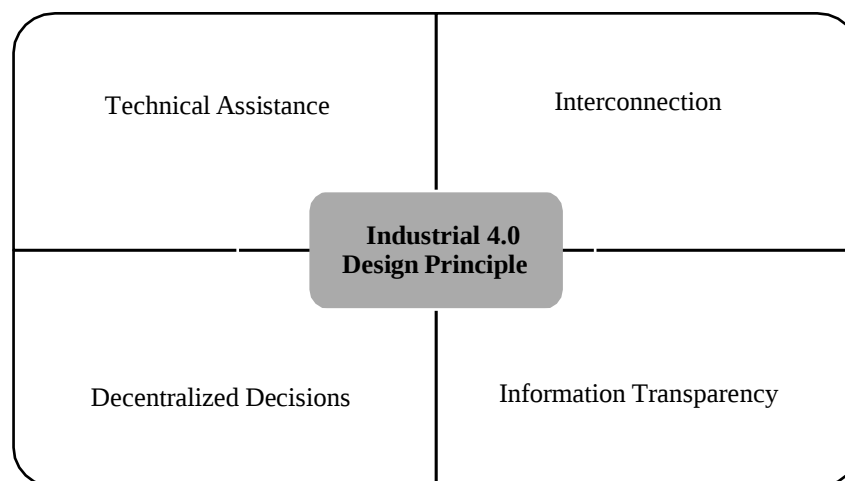


Figure 4. Principles of IR 4.0 (Herman et al., 2015)



Figure 5. Universal Design & Agile Development Model (Din, 2020; Ishak et al. 2021)

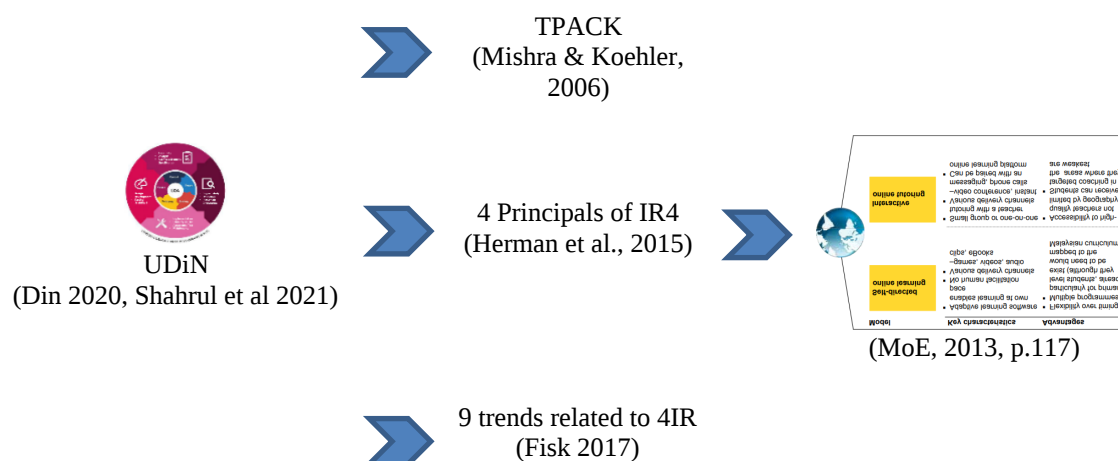


Figure 6. Proposed conceptual framework suggested for the ICT in teaching English language teaching

Based on these nine trends mentioned above, ICT in ELT today can be implemented diversely, for instance, by applying blended learning, flipped classroom or Bring Your Own Device (BYOD) approaches to enhance the secondary school students' English language through its dynamic, interactive and engaging content. It can also provide real opportunities for individualized instruction (Alkamel and Chouthaiwale, 2018). These approaches will be excellent exposure for teachers to equip themselves with adequate knowledge on ICT to meet the requirements of the students, who are considered digital natives. It is a must for the teachers to support

the transition in this IR 4.0 and should never consider it a threat to the traditional teaching profession (Delipiter, 2019) regardless of education level or subject teaching, mainly in ELT. With the help of ICT as an educational technological tool available freely on the internet, second language teaching can be a fruitful experience.

CONCLUSION

This paper discussed on theory and concepts of implementation of ICT as an educational technological tool to enhance secondary school students' English language teaching. In the current era, teachers must learn the advancement of computer and networking technologies to support teaching in a more personalized, flexible, portable and on-demand manner. The TPACK framework, which integrates technology in the classroom, can be used in ELT, thus aiding the teachers in designing their lessons. The implementation of ICT as an educational technological tool seems to fit the TPACK framework as today's education system demands the use of technology. As technology grows swiftly, this can set up the education and students for the future. Therefore, implementing ICT on a massive-scale in teaching the English language can meet the secondary school students' needs, which are digital natives.

Penghargaan

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