Exploring Teacher Agency in Technology-Mediated EFL Instruction in the Lower Northern Region of Thailand
การศึกษาความเป็นตัวแทนของครูในการใช้เทคโนโลยีในการเรียนการสอนภาษาอังกฤษในเขตภาคเหนือตอนล่างของประเทศไทย

Thitirat Suwannasom[1]
ฐิติรัตน์ สุวรรณสม[2]

(Received: 11 March 2020; Revised: 29 June 2020; Accepted: 24 July 2020)

Abstract

Although ICT technology tools and social networking applications are being applied in Thai EFL classrooms at all levels, teacher agency which includes teachers' experience, decision, and practice have been underexplored. This paper investigated EFL teachers' agency in using technology in English language instruction. A questionnaire constructed on the three dimensions of agency was administered to 81 English teachers in primary and secondary schools in the lower northern region of Thailand. The result from the questionnaire revealed that teachers' agency towards technology-mediated choices is embedded with their concurrent practice yet constrained with external limitations and lack of support. It is also suggested that teachers are likely to welcome technology if it fits into their concurrent pedagogical approaches and supports students' collaborative and self-directed learning.

Keywords: Teacher agency, Technology-mediated language instruction, EFL instruction

บทคัดย่อ

แม้ว่าเทคโนโลยีสารสนเทศและเครื่องมือเครือข่ายสังคมได้ถูกนำมาปรับใช้ในการสอนภาษาอังกฤษเป็นภาษาต่างประเทศในบริบทการศึกษาไทยในทุกระดับชั้น ความเป็นตัวแทนของครูในด้านประสบการณ์ การตัดสินใจ และแนวการสอนเกี่ยวการใช้เครื่องมือเหล่านั้นยังไม่ได้ถูกศึกษาเท่าที่ควร งานวิจัยนี้ศึกษาการรับรู้ของครูด้านความเป็นตัวแทนของครูในการใช้เทคโนโลยีในการเรียนการสอนภาษาอังกฤษ แบบสอบถามเกี่ยวกับมิติของความเป็นตัวแทนในสามด้านได้ถูกสร้างขึ้นและนำไปใช้กับผู้ตอบแบบสอบถามจำนวน 81 คนซึ่งเป็นครูผู้สอนภาษาอังกฤษในเขตภาคเหนือตอนล่างของประเทศไทยทั้งในระดับประถมและมัธยมศึกษา ผลการวิจัยพบว่า ความเป็นตัวแทนของครูในการเลือกใช้เทคโนโลยีนั้นเกี่ยวข้องกับสภาพการเรียนการสอนในปัจจุบันที่มีทั้งข้อจำกัดภายนอกและขาดการ

[1] Assistant Professor Dr., Department of English, Faculty of Humanities, Naresuan University

[2] ผู้ช่วยศาสตราจารย์ ดร. ภาควิชาภาษาอังกฤษ คณะมนุษยศาสตร์ มหาวิทยาลัยนเรศวร

สนับสนุน และพบว่าครูได้เลือกใช้เทคโนโลยีที่สอดคล้องกับแนวคิดการสอนในปัจจุบันของตนเองและเลือกเครื่องมือที่ส่งเสริมการเรียนรู้แบบร่วมมือและการเรียนรู้ด้วยตนเองของนักเรียน

คำสำคัญ: ความเป็นตัวแทนของครู การเรียนการสอนโดยใช้เทคโนโลยี การสอนภาษาอังกฤษเป็นภาษาต่างประเทศ

Introduction

For teachers, adopting technology in classroom is closely related to their identities and professional mindsets. According to Dweck (2008), mindsets are constructed through individuals' perspectives which influence people's choices of actions, problem-solving techniques, and challenges. In order to achieve particular goals, learning from others through collaboration becomes one of the keys to success. Since teachers' pedagogical beliefs and practices directly influence their practice and students' learning performance (Vibulphol, 2004; Loo, Trakulkasemsuk, & Zilli, 2017), how teacher embrace technology in language classroom can showcase a model of learning languages with technology for students. Therefore, teachers' understanding of technology is crucial for digital literacies of young generations. In a language classroom setting, teachers can also demonstrate how to deal with technology-related issues such as locating trustworthy learning sources, utilizing tools for honing language skills, and blending technology smoothly to facilitate language learning. In other words, teachers need to show students that technology is a learning company – not just a smart tool for entertainment or personal communications. Nevertheless, it is not easy to seamlessly integrate technology in teaching practices. As Ertmer (2005) mentioned, the first step to integrating technology in the classroom is to believe in its potential and seeing the promising opportunities in supporting students' learning and pedagogical practice. To get started, teacher agency needs to be addressed to understand teachers' orientation of instructional methods and classroom management.

Furthermore, technology-mediated practice is facing not only the challenges from the ever-changing development of technology, but also teachers' conformity with their working context. When teachers construct their knowledge in teaching, they also look for collaborations and supports from colleagues, students, supervisors and other members of school communities (York-Barr & Duke, 2004). Adopting a new teaching tool is considered an investment to improve teaching and increase student learning and achievement; nevertheless, teachers may require supports from colleagues or professional communities to co-construct knowledge that is situated in and emerges out of the sociocultural practices and contexts (Johnson, 2015). Since technology-mediated practice is highly

context-sensitive, teacher agency and identity are intertwined to generate situated practices (Beauchamp & Thomas, 2009).

Therefore, to understand deeper constructs of teaching with technology in language classrooms, different dimensions of teachers' perception of their past experiences, current practice, and the prospective views of future need to be carefully examined. In addition, there are ecological factors involving the use of tools in human interaction which are indispensable when it comes to learning a foreign language (Zhao & Frank, 2003). No matter what tools or teaching aids are available, teachers' situated decision is the key factor of curriculum execution.

Teachers' Three Dimensions of Agency

Teachers' trajectories of classroom interventions can be explained by the three dimensions of agency proposed by Emirbayer and Mische (1998). The concept of agency involves the dynamic interplay between three dimensions (see Figure 1).

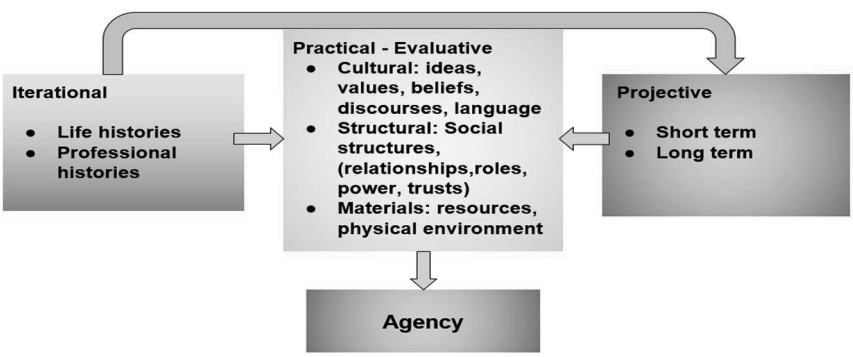

Figure 1 The three dimensional of agency (Emirbayer & Mische, 1998, p. 970)

According to Emirbayer and Mische (1998), the constructs of agency are built upon different dimensions of teachers' personal and environmental factors. In this case, Priestley, Edwards, Priestley, & Miller (2012) explain that the achievement of agency should be understood as a configuration of three dimensions: experiences from the past (iterational), orientations towards the future (projective) and engagement with the present (practical-evaluative). These three dimensions play a role in all concrete actions. In concrete actions, all three dimensions play a role, but the degree which they contribute to concrete achievements of agency varies, as Emirbayer and Mische

remark on a 'chordal triad of agency within which all three dimensions resonate as separate but not always harmonious tones' (Emirbayer & Mische, 1998, p. 972). In the same way, Biesta, Priestley, & Robinson (2015) define agency as individual's commitment, responsibility, choices of action, self-evaluation, and establishing relevance with other domains in professional life. This is also similar to Roger and Wetzel's (2013) definition of agency, which is "the capacity of people to act purposefully and reflectively on their world" (p.63). Similar to identity, agency is shaped by social interactions and acquired through different situations (Priestley, Biesta, & Robinson, 2013). This means that human agency is mediated by interactions between individuals, the tools, and social structures; consequently, an individual may employ different agencies in different situations.

In addition, the role of agency involves selective patterns of thought and action for realistic activities that fit into the present situations. Agency is also connected with motivation and conceptualization of the future outcome or projective dimension which is different from the present and the past (Biesta et al., 2015). Although agency depends on the future and the past dimensions, it can only emerge in the present through the practical-evaluation dimension or choices of actions and decisions made in reality. When challenged with uncertainty, dilemmas, demands, and other requirements in evolving situations, agency rules the choice of actions and the way individual respond to locality needs (Kalaja, Barcelos, Aro, & Ruohotie-Lyhty, 2015). While in a classroom environment, Calvert (2016) pointed out that teacher agency underpins the capacity to act purposefully and constructively to direct one's professional growth. Both of the iterational and projective domain of individuals significantly influence teachers' current practical-evaluative choice of values, roles, and relationship with other social structures. Agency, in other words, is not just what teachers have in mind or their capacity but is something that teachers actually respond to the environment and decide to do in classrooms.

Other previous studies about technology-mediated instruction have also investigated the closely related terms of agency which include teacher pedagogical belief, autonomy, motivation, and community learning. According to Schulz, Isabwe, and Reichert (2015), a technological tool will be adopted by teachers if it fits into their skills, beliefs, and attitudes towards the tool. Chigona, Chigona, and Davids (2014) also suggested that human factors including teachers' motivation, judgment, and personal belief are highly involved in the process of integration. In addition, teacher professional learning community and peer support also influence the development of technology-

mediated instruction and innovating with technology (Cheng, 2017; Zhao, Pugh, Sheldon, & Byers, 2002). Teachers' technology-related decision is also determined by the alignment between the potential of the tool and the learning objective which can help to facilitate learners' development. In this respect, previous research studies have suggested that the effective uses of technology in language teaching involve students' collaborative learning (Larson, 2008; Yunus et al., 2009), problem-solving, critical thinking, motivation (Mahmud, 2018), and knowledge construction (Hegelheimer, 2006a).

For language teachers, agency has strongly interconnected with contextual conditions including the school policy, colleagues, curriculum, teaching materials, students, and available technology. Therefore, to determine how technology would be adopted successfully in the classroom, the connection between teacher agency and the technology-mediated instruction should be negotiated. As Priestley et al. (2012) suggest, if individuals take on their agentic positions, they are likely to exercise agency and have the willingness to act. Therefore, to ensure successful ICT integration, it is necessary for teachers to perceive the potential of the technology tool in supporting their teaching identity, enhancing their everyday practice, as well as their students' learning style. To cultivate agency through the use of digital tools among teachers, it is paramount to appreciate not only the successful outcomes of technology adoption but also the setback and limitations found on the course of technology-based practice. Apparently, the challenges of using digital tools in each educational setting need to be closely examined to reveal the underlying conditions of accepting technology as a part of learning and teaching dynamics (Gil-Flores, Rodríguez-Santero, & Torres-Gordillo, 2017). Within the context of technology-mediated instruction, the use of digital tools does not always guarantee effective instructional practices or learners' successful outcome as there are several factors including learners' readiness and proficiency (Chigona, et al., 2014) ineffective internet connection and not enough computers (Zhao & Frank, 2003), and teachers' beliefs attitudes towards technology (Levin & Wadmany, 2008). That is to say, the success of technology-mediated language instruction relies on how teachers understand themselves and perceive the relevance of technology potential and learning languages in the 21st century.

Rationale

Regarding Thai educational contexts, adopting technology tools in English language instruction is no longer new; however, teachers and students at all levels have been facing challenges and

limitations in embracing the tools into English language learning and teaching. Previous studies in the Thai context have reported the external factors such as lack of equipment, the unreliability of technology and lack of resources are obstructing the adoption of ICT in English instruction (Chomphuchart, 2013; Tanakachane, 2005; James, 2008). However, human-related factors such as teachers, administrators, and students are considered more critical in determining the successful use of ICT in education. In a Thai university context, James (2008) explored lecturers' perceptions of ICTs and online learning by using a self-administered questionnaire. The result revealed that the institutional policy on e-learning needed to be established to strengthen the use of ICT in classroom instruction. Gandhi and Lynch (2017) investigated Thai international school teachers' perceived self-confidence in integrating ICT in their classes and found that the majority of participants had high-level knowledge and confidence in integrating ICT in their classes. Although a significant difference between male and female teachers was reported that male teachers were more confident to use ICT in their instruction, the study had not discussed teachers' professional learning or and contextual influences as determining factors in ICT integration. Given that the blended instructional models and e-learning platforms have been receiving greater attention in the Thai tertiary context, Suwannasom and Novio (2014) suggested that teacher role and choices of activities are crucial to the delivery of blended language instruction; teachers are indispensable in students' learning and navigation in virtual learning environments.

From previous studies, the investigation into the transfer of teacher pedagogical experience and perception in technology-mediated classrooms has been missing. The exploration of teacher agency in adopting digital tools in the classroom may reveal the underpinning constructs of such practice. According to Duff (2012), agency strongly influences how people construct their disposition and practice in adopting new roles and approaches to accomplish their goals. Since agency can enable people to "actively resist certain behaviors, practices, or positioning, sometimes leading to oppositional stances and behaviors leading to other identities" (Duff, 2012, p.15), without tapping into teacher agency, the understanding of technology-mediated language instruction is incomplete. This is in accordance with van Lier (2007) who advocates the negotiation among teacher identity, school environments, and new pedagogical tools. Therefore, teachers' professional value and identity should be prioritized before giving away facilities and trainings when it comes to technology-related instruction.

Research Objective

This research was conducted to investigate teachers' perceptions of agency in technology-mediated English language instruction in the lower northern region of Thailand. These included the level of agentic awareness regarding the practicality of tools, activities, decisions, and freedom in applying the technology-mediated tool in their English language instruction.

Methodology

This survey research was conducted to understand teachers' deeper construct of educational ICT integration. The concept of agency (Emirbayer & Mische, 1998) that involves the dynamic interplay between three dimensions of teachers' professional beliefs and practices was used as the research framework. The questionnaire was designed based on the notion of agency as a configuration of influences from the past, orientations towards the future and engagement with the present. They refer to these three dimensions as the iterational, the projective and the practical-evaluative dimension, respectively. The questionnaire was divided into two parts. The first part was the participants' personal information and choices of ICT tools. The second part included the 5-point rating scale questions and checklists about the perception of activities, perceived barriers, and prospective views of technology in English language instruction. In the last section of the questionnaire, an open-ended question was provided for teachers to share their expectations of technology-mediated teaching in their classroom. The questionnaire validity was conducted using the Item Objective Congruence (IOC) index by the three experts in the field of applied linguistics and technology-mediated language teaching. Each item score was higher than 0.5, yielding the IOC score of 0.88, which affirmed that the questionnaire was appropriately constructed. For the reliability, the Cronbach's alpha coefficient was obtained from the non-sample group of 30 participants; the score was at 0.87, indicating the high reliability of the questionnaire.

The questionnaire was administered to 81 English teachers, 28 people from primary and 53 people from secondary schools in the lower northern region of Thailand by the purposive sampling technique. These participants were volunteers from an online professional development community of 153 local EFL teachers founded since 2017. In this group, EFL teachers from lower northern provinces of Thailand, namely, Tak, Sukhothai, Uttaradit, Phitsanulok, Phichit, and Phetchaboon, joined and shared professional experiences about using online tools, teaching techniques, and

learners' engagement strategies from their classroom settings. The questionnaire were administered online using Google Form in which participants were required to answer each question before submission; therefore none of the question was omitted or unanswered. Descriptive statistics, mean and percentages, were used to analyze the data.

Findings

1. Teachers' learning to use ICT in ELT

In order to explore their history of technology-mediated English instruction, participants were prompted to select how they learned to apply technology tools in classroom teaching. According to Table 1, the great majority of respondents reported that they learned by themselves (81.5%), attended lectures, conferences, or workshops (70.4%), and learned from colleagues (50.6%), respectively. While less than half of the participants learned from their bachelor's or master's program (43.2%), only a minority of them learned from the students (35.8%) or others (1.2%).

Table 1 How Teachers learn to use ICT in ELT

Items	Number of Participants	Percentage
BA/MA programs	35	43.2%
Lectures/conferences/workshops	57	70.4%
Colleagues	41	50.6%
By themselves	66	81.5%
Students	29	35.8%
Others	1	1.2%

2. Teachers' preference of ICT tools in ELT

According to Figure 2, participants responded to the question asking about their preference of ICT tools in English language instruction. Among the 12 types of ICT/social media tools shown in Figure 2, it was found that the most selected tools were YouTube (98.8%), Online dictionary (75.3), Facebook (74.1%), and Google Applications (66.7%), respectively (see Figure 2). Less than half of the participants adopted Line or WhatsApp (37%), Online Quiz (34.6), and email (24.7%) in their classroom teaching, while a small number of participants employed Instagram or Pinterest (23.5%), Learning Management System (14.8%), Blog (14.8%), Twitter (11.1%), Skype or Facetime (9.9%), and others (2.4%).

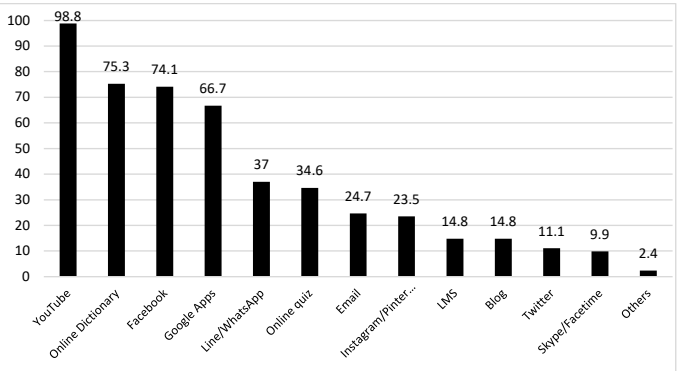

Figure 2 Participants' choices of ICT/social networking tools

3. Teachers' perception of ICT activities and barriers

For the perception of ICT activities, participants were asked to rate their perception on the usefulness of students' technology-mediated language learning activities. Based on the 5-point Likert scale, the answer contained the following scale values: 4.50 – 5.00 (Very useful), 3.50 – 4.49 (Useful), 2.50 – 3.49 (Neutral), 1.50 – 2.49 (Not useful), and 1.00 – 1.49 (Not very useful). Among the nine items, the use of dictionary application to enhance vocabulary learning ($\bar{x}$ = 3.85) was rated the highest, followed by the use of computer programs to create English language digital content ($\bar{x}$ = 3.63), and the practice English from reading and watching videos on social media pages ($\bar{x}$ = 3.58), respectively (see Table 2). The two highest rated tools (online dictionary and program for creating digital content) also corresponded with their most selected choices of ICT tools in Figure 2. Participants also rated the following activities useful for their students, namely, playing online games ($\bar{x}$ = 3.47), using Google applications to do the language project ($\bar{x}$ = 3.41), using social networking to communicate ($\bar{x}$ = 3.37), and doing online exercises ($\bar{x}$ = 3.27). Nevertheless, using social networking pages to publish students' projects ($\bar{x}$ = 3.21) and following or subscribing social networking pages ($\bar{x}$ = 3.19) were perceived as the least useful activities.

Table 2 Summary of Responses on the usefulness of technology-mediated activities

Items	Mean	S.D.	Interpretation
1. Use social networking pages (FB/Instagram) or blogs to publish their language project	3.21	1.09	Neutral
2. Use Google Doc/Slide/Form to collaboratively do the language project/assignment.	3.41	1.03	Neutral

Items	Mean	S.D.	Interpretation
3. Use computer programs to create English language digital content.	3.63	1.12	Useful
4. Practice English from reading or watching video/movies on social media pages.	3.58	0.93	Useful
5. Practice English by doing online exercises or quizzes.	3.27	1.16	Neutral
6. Use dictionary applications to enhance their vocabulary learning and usage.	3.85	1.06	Useful
7. Practice using English to communicate in social networking groups (FB group, Line, Instagram, Google Community, etc.)	3.37	1.14	Neutral
8. Play online/ mobile game to practice English in simulated communicative settings.	3.47	1.02	Neutral
9. Follow or subscribe social networking pages to learn English by themselves.	3.19	1.08	Neutral

4. Teachers' perception of agency in using ICT in ELT

For the level of agency in using ICT, participants were asked to rate the statements representing their choice of practices, decisions, supports, and other factors relating to technology-mediated language instruction. Based on the 5-point Likert scale, the answer contained the following scale values: 4.50 – 5.00 (Strongly agree), 3.50 – 4.49 (Agree), 2.50 – 3.49 (Neutral), 1.50 – 2.49 (Disagree), and 1.00 – 1.49 (Strongly disagree).

According to Table 3, participants strongly agreed with these statements: "I have freedom to choose which ICT workshops or professional learning sessions…" ($\bar{x}$ = 4.06), "I can adopt any ICT tools or social networking applications..." ($\bar{x}$ = 3.74), "I am allowed to customize and use my online teaching materials…" ($\bar{x}$ = 3.62), and "I can set my goals and objectives about what to teach and how my students learn with technology…" ($\bar{x}$ = 3.54), respectively. They also agree on the items: "I am supported by the head administrator to create innovations in English instruction by using ICT…" ($\bar{x}$ = 3.48), "My online content, activities, or materials are constructed based on my own teaching knowledge and experiences." ($\bar{x}$ = 3.44), and "My teaching expertise and prior success ... has been recognized and accredited." ($\bar{x}$ = 3.22).

For the lowest rated items, participants were least agreed with the two statements: “I have peer learning groups or networks to share my teaching ideas in using ICT and online applications.” ($\bar{x}$ = 3.10) and “I have enough time to cultivate my ICT skills and create my own online materials.” ($\bar{x}$ = 3.01).

Table 3 Summary of responses on the agency in using ICT in ELT

Items	Mean	S.D.	Interpretation
1. I can adopt any ICT tools or social networking applications I like to enhance my classroom teaching.	3.74	0.89	Agree
2. I am allowed to customize and use my online teaching materials as long as they comply with the core curriculum.	3.62	0.81	Agree
3. I am supported by the head administrator to create innovations in English instruction by using ICT or social networking tools.	3.48	0.95	Agree
4. I have peer learning groups or networks to share my teaching ideas in using ICT and online applications.	3.10	1.09	Neutral
5. My teaching expertise and prior success in using ICT or social networking tools has been recognized and accredited.	3.22	0.88	Neutral
6. My online content, activities, or materials are constructed based on my own teaching knowledge and experiences.	3.44	1.06	Neutral
7. I can set my goals and objectives about what to teach and how my students learn with technology and online applications.	3.54	0.96	Agree
8. I have freedom to choose which ICT workshops or professional learning sessions I would like to attend.	4.06	0.82	Agree
9. I have enough time to cultivate my ICT skills and create my own online materials.	3.01	1.06	Neutral

5. Teachers’ perception of barriers in ICT adoption in ELT

Participants were asked to select only one of the most perceived barriers in adopting ICT into their daily classroom practices. It was found that poor internet connection (31.8%), having not enough time (28.0%), and having not enough devices (22.0%) were perceived as significant barriers in employing technology in their teaching. However, having not enough supports from

school and colleagues (10.9%), having other factors such as curriculum restriction (4.8%), and feeling not confident in their ICT skill (2.5%) were perceived as shortcomings at a lower percentage (see Figure 3).

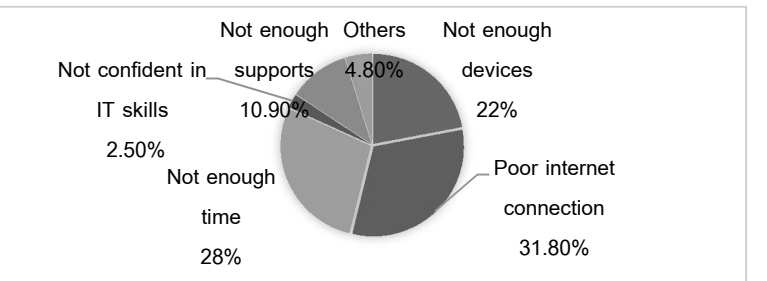

Figure 3 Teachers' perceived barriers in adopting ICT

6. Teachers' prospective views on technology-mediated ELT

To uncover teachers' expectations of ICT and social networking tools in language teaching, the participants were asked to select statements about the future of technology in ELT in the Thai educational context. Table 3 revealed that more than half of the teachers thought that "student self-study will increase because of efficient tools" (54.3%), which was followed by "more online classes will be offered than face-to-face classes." (49.4%), "more online classes will increase; however, the face-to-face session is indispensable." (40.7%), and "students will interact with their classmates and teachers online rather than meeting face-to-face." (39.5). Nevertheless, some minorities of teachers were less likely expecting for "simulation or virtual reality programs will be used in classrooms instead of textbooks." (28.4%), "artificial intelligence (AI) will be used as a teaching assistant." (21%), and "human teachers will be made redundant because of AI replacement in school." (14.8%).

Table 4 Teachers' prospective views on technology-mediated ELT

Items	Number of participants	Percentage
1. More online English classes will be offered than face-to-face English classes.	40	49.4
2. More online English classes will increase; however, face-to-face English classes are indispensable.	33	40.7

Items	Number of participants	Percentage
3. Students' self-study will increase because of efficient tools.	44	54.3
4. Students will interact with their classmates and teachers online rather than seeing each other face-to-face.	32	39.5
5. Fewer students will attend face-to-face class because they have online options which are more economical and convenient.	16	19.8
6. Online games/simulation programs including Virtual Simulation (VR) will be used in classrooms instead of textbooks as teaching materials.	23	28.4
7. Artificial intelligence (AI) will be used as a teaching assistant.	17	21
8. Human teachers will be made redundant because of AI replacement in schools.	12	14.8

Conclusion and Discussion

To understand English teachers' deeper construct of educational ICT integration, the three-dimensional concepts of agency by Emirbayer & Mische (1998) were adopted as the theoretical framework in this study. The research objectives were to discover teachers' underlying constructs drawing on their past experiences, concurrent pedagogical decision, and expectation about technology-mediated instruction at their school settings. The following conclusion and discussion are presented in three dimensions of agency: iterational, practical-evaluative, and projective, as follows.

For the iterational dimension including the previous knowledge and past experiences, the participants' responses revealed that most of the teachers learned to use ICT in classrooms by themselves, mostly by attending lectures or workshops that they were interested in. This finding concurred with Chigona et al. (2014) that teachers who adopt technology-mediated instruction usually learned by themselves and are motivated to adopt the tool in their daily practice because they recognize the merits of ICT in language learning. In addition, some of the participants learned from their coworkers (See Table 1), this has highlighted the importance of professional learning community that appears to play a role in encouraging technology-mediated language instruction among teachers. As Zhao et al. (2002) put forward, teachers seek supports from their peers and professional network to adjust their technology practice and delivering techniques. Using the knowledge from their past training and professional development program may encourage

technology-mediated teaching in EFL language instruction if what they acquired fit into their school practice. Additionally, teachers' adoption of technology is considered a model of learning languages through technology for students which possibly encourages more effective use of technology-mediated learning among colleagues and students.

In the practical-evaluative dimension regarding the concurrent decision to use the ICT tool in teaching, participating teachers responded to reveal their choices of tools that support their practices. Among several ICT tools including the prevalent social media applications, YouTube, online dictionary, Facebook, and Google tools were the most adopted tools in English language teaching. These tools, according to Larson (2008) and Yunus et al. (2009), have the potential to encourage students' collaborative learning and skills in developing their own content which is one of the most critical skills in the 21st century learning. This also pointed out the perceived needs of 21st century skills and the awareness towards Thailand 4.0 policy that all government and private sections are required to integrate technology in their practices.

Moreover, participating teachers also indicated the existing barriers in adopting technology in the practical-evaluative dimension. Although the external factors including not having enough time, ineffective devices, and inadequate facilities were rated the highest, teachers' confidence and skills in using technology became the least mentioned obstacles in technology-mediated language instruction. This finding suggested that English teachers in this study were no longer strangers to technology or other social media tools which is probably different from the past that one of the most obstructive factors to technology adoption were teachers' skills and knowledge (Gandhi and Lynch, 2017); Gil-Flores et al., 2017). Nevertheless, technology and social media tools nowadays have been developed to be more user-friendly, and anyone can learn to use new applications to learn languages in no time. Additionally, teachers' adoption of technology is considered a model of learning languages through technology for students which possibly encourage more effective use of technology-mediated learning among colleagues and students. This has confirmed the crucial role of teachers' agentic action and decision in technology-mediated teaching. As Priestley et al. (2012) contended, when teachers purposefully adopted particular teaching tools in their practice, their instructions are objective-oriented and positively influence students' achievement in language learning.

Looking to the future, the projective dimension of teacher agency revealed teachers' perception about English language instruction in the next 20 years. Participants agreed that there

would be an increase of online self-study programs. They also perceived a more active and pervasive role of AI and virtual reality in English language learning. However, human contact in technology-mediated language instruction is yet vital. The requirement of teacher facilitating roles had been found earlier in a previous study of blended language learning context in Thailand (Suwannasom & Catane, 2016). Although students were familiar with technology tools and capable in using online devices, teachers still play a significant role in facilitating their learning, navigation, and management.

Furthermore, some of the open-ended responses from the participants revealed about their expectations of teachers' roles and technology in the future classroom. To summarize, some participants mentioned that they look forward to applying applications that can analyze each students' needs and provide customized support; while others looked for affordable and user-friendly tools for those who had limited technology access or resources. This is in line with Ruohotie-Lyhty (2013) who pointed out teachers' conceptualization of the relevance between the potential of technology and students' achievement in language learning. It was also found that participating teachers agreed on using tools that encourage students' motivation and engagement in learning as well as enhancing the 21st century skills. As one of the participants wrote "*We are currently working towards the national education goals of producing students of the 21st century, so I'm trying to adjust my teaching to the students' needs of new learning platforms and autonomy in the modern world*." Although the overall questionnaire result in the projective dimension did not connote a vigorous technology embrace among participants at that moment, some positive perspectives mentioned above suggests positive attempts to accommodate technology-mediated teaching and student autonomous learning in the Thai context.

To conclude, the investigation into the three dimensions of agency emerged from these participants revealed that the decision to integrate technology in language teaching was influenced by teachers' perspectives of the future and past experiences. However, teachers were selective to employ specific tools depending on the level of practicality of use with their students and school contexts. As Kalaja, et al., (2015) suggest, teachers' decisions and actions emerge through their practical-evaluation dimension towards the evolving situations including students, school administration, curriculum, and professional supports. This indicated that teacher agency directly guides technology-mediated practice within this context of study.

Recommendation

From the findings of this study, it is suggested that the achievement of technology implication in English instruction in Thai educational context would not be possible without tapping on teachers' personal and professional background, decision, preference, network, and expectation of their teaching future. No matter what tools or teaching aids are available, teachers' decision is the key factor of curriculum development. Therefore, priorities should be placed on teachers' needs and constraints before providing them with technology devices, applications, or workshops. To strengthen the adoption of technology and social media tools in English language instruction, teachers' cultivation of skills in applying any technology at hand in everyday teaching may alleviate the shortage of external facilities. Tapping into language teacher and student agency is possibly the first step to initiate meaningful adoption of technology in the Thai EFL educational settings.

Nevertheless, this study has not yet looked deeper into teachers' personal and ecological factors in using technology tools in their teaching because it was conducted to gather the overall perspectives of teachers' perceptions and practical choices they had made. Therefore, a more contextualized investigation and qualitative analysis should be conducted to stake out teachers' self-positioning and factors inhibiting/enhancing agency in ICT-mediated contexts. Furthermore, a more qualitative study into teachers' temporally constructed engagement and other ecological factors should be directed to thoroughly unearth the dimensions of agency. The understanding of EFL teacher agentic dimensions may yield the understanding of teachers' decisions and activities including how they empower their students' learning by embracing technology in language classrooms.

Reference

Beauchamp, C. & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. ***Cambridge Journal of Education,*** *39*(2), 175-189.

Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. ***Teachers and Teaching: Theory and Practice***, *21*(6), 624-640.

Biesta, G., & Tedder, M. (2006). How is agency possible? Towards an ecological understanding of agency-as-achievement (Working Paper 5). Exeter: The Learning Lives Project.

Calvert, L. (2016). ***Moving from compliance to agency: What teachers need to make professional learning work***. Oxford, OH: Learning Forward and NCTAF.

Chigona, A., Chigona, W., & Davids, Z. (2014). Educators' motivation on integration of ICTs into pedagogy: case of disadvantaged areas. ***South African Journal of Education***, *34*(3), 1-8.

Cheng, P.L. (2017). ***Professional learning community (PLC): Technology integration at a Title I elementary school.*** Doctoral dissertation, Education Department, San Jose State University. doi: 10.31979/etd.58wj-dk5q.

Chomphuchart, N. (2013). Multiliteracies, technology and English language teaching and learning. ***University of the Thai Chamber of Commerce Journal***, *33*(2), 214-228.

Duff, P. A. (2012). Identity, agency, and second language acquisition. In A.Mackey & S.M. Gass (Eds.), ***Handbook of second language acquisition*** (pp. 410–426). London: Routledge.

Dweck, C. S. (2008). ***Mindset: The new psychology of success.*** Random House Digital, Inc.

Emirbayer, M., & Mische, A. (1998). What is agency? ***American Journal of Sociology***, *103*(4), 962 -1023.

Ertmer, P. A. (2005). Teacher pedagogical beliefs: the final frontier in our quest for technology integration? ***Educational Technology Research and Development,*** *53*(4), 25-39.

Fullan, M. (2001). ***Changing forces: The sequel***. London: Falmer Press.

Gandhi, H.K., & Lynch, R. (2017). A comparative study of teachers' knowledge of common ICT software, their perceptions towards using ICT and their perceived self-confidence in integrating ICT in their classes according to gender in two international schools in Thailand. ***Scholar,*** *8*(2), 78-93.

Gil-Flores, J., Rodríguez-Santero, J., & Torres-Gordillo, J. (2017). Factors that explain the use of ICT in secondary-education classrooms: The role of teacher characteristics and school infrastructure. ***Computers in Human Behavior,*** *68*, 441-449.

Harré, R., & Slocum, N. (2003). Disputes as complex social events. ***Common Knowledge***, *9*(1), 100–118.

Hegelheimer, V. (2006a): When the technology course is required. In Levy, M. & Hubbard, P. (Eds.) ***Teacher education in CALL***. Philadelphia: John Benjamins, 117-133.

Hegelheimer, V. (2006b). Helping ESL writers through a multimodal, corpus-based, online grammar resource. ***CALICO Journal***, *24*(1), 5-32.

James, P. T. (2008). Academic staff perceptions of ICT and e-learning: A Thai HE case study, ***The Turkish Online Journal of Educational Technology***, *7*(4), 36-45.

Johnson, K. E. (2015). Reclaiming the Relevance of L2 Teacher Education. **Modern Language Journal,** 99, 515-528.

Kalaja, P., Barcelos, A. M. F., Aro, M., & Ruohotie-Lyhty, M. (2015). ***Beliefs, agency and identity in foreign language learning and teaching***. New York: Springer.

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge*?* ***Contemporary Issues in Technology and Teacher Education***, *9*(1), 60-70.

Larson, L.C. (2008). Electronic reading workshop: Beyond books with new literacies and instructional technologies. ***Journal of Adolescent & Adult Literacy,*** *52*(2), 121-131.

Levin, T., & Wadmany, R. (2008). Teachers' views on factors affecting effective integration of information technology in the classroom: Developmental scenery. ***Journal of Technology and Teacher Education***, *16*(2), 233-263.

Loo, D. B., Trakulkasemsuk, W., & Zilli, P. J. (2017). Examining narratives of conflict and agency: Insights into non-local English teacher identity. ***The Journal of AsiaTEFL***, *14*(2), 292-306.

Mahmud, M.M. (2018). Technology and language–what works and what does not: A meta-analysis of blended learning research. ***The Journal of AsiaTEFL,*** *15*(2), 365-382.

Meirink, J. A., Meijer, P., Verloop, N., & Bergen, T. C. M. (2009). Understanding teacher learning in secondary education: The relations of teacher activities to changed beliefs about teaching and learning. ***Teaching and Teacher Education,*** *25*, 89–100.

Ngarmpornchai, A., & Adams, J. (2016). Students' acceptance and readiness for E-learning in Northeastern Thailand. ***International Journal of Educational Technology in Higher Education***, *13*, 1-13.

Pilot, A. (2007). The teacher as a crucial factor in curriculum innovation, the case of Utrecht University. In ***Proceeding of Teaching and Learning according and after Bologna, at the Swiss Federal Institute of Technology*** (pp.1-19). Zurich, Switzerland.

Priestley, M. (2011). Schools, teachers and curriculum change: A balancing act? ***Journal of Educational Change,*** *12*, 1-23.

Priestley, M. Biesta, G., & Robinson, S. (2013). Teachers as agents of change: Teacher agency and emerging models of curriculum. In M. Priestley & G. Biesta (Eds), ***Reinventing the curriculum: New trends in curriculum policy and practice*** (pp. 187-206). London: Bloomsbury Academic.

Priestley, M., Edwards, R., Priestley, A., & Miller, K. (2012). Teacher agency in curriculum making: Agents of change and spaces for maneuver. ***Curriculum Inquiry,*** *42*, 191-214.

Ruohotie-Lyhty, M. (2013). Struggling for a professional identity: Two newly qualified language teachers' identity narratives during the first years at work. ***Teaching and Teacher Education***, *30*, 120-129.

Rogers, R., & Wetzel, M. M. (2013). Studying agency in literacy teacher education: A layered approach to positive discourse analysis. ***Critical Inquiry in Language Studies***, *10*(1), 62-92.

Saowapon, C., Laohajaratsaeng, T., Thammajinda, R., & Singharajwarapan, S. (2001). ***Education reform and e-learning in Thailand***. Retrieved on December 14, 2019, from http://www.oecd.org/education/skills-beyond-school/2428376.pdf

Schulz, R., Isabwe, G.M., & Reichert, F. (2015). Ethical issues of gamified ICT tools for higher education. ***IEEE Conference on e-Learning e-Management and e-Services (IC3e),*** 27-31.

Suwannasom, T. & Novio, E.B. (2014). Faculty perceptions of roles in a blended language learning environment. ***ThaiTESOL Journal***, *27*(1), 65-82.

Suwannasom, T. & Catane, N. G. (2016). Exploring university students' attitudes and strategies in a blended English language learning environment. ***Khon Kaen University International Journal of Humanities & Social Sciences***, *6*(1), 10-31.

Tanakachane, T. (2005). ***Factor Affecting ICT Integration into ELT in Nakhon Ratchasima Vocational Education Institutes***. Master's Thesis, Suranaree University of Technology.

van Driel, J., Beijaard, D., & Verloop, N. (2001). Professional development and reform in science education: the role of teachers' practical knowledge. ***Journal of Research in Science Teaching***, *38*, 137-158.

van Lier, L. (2007). Action-based teaching, autonomy, and identity. ***Innovation in Language Teaching and Learning****, 1*, 46-65.

Vibulphol, J. (2004). ***Beliefs about language learning and teaching approaches of pre-service EFL teachers in Thailand,*** Doctoral dissertation, Oklahoma State University.

York-Barr, J., & Duke, K (2004). What do we know about teacher leadership? Findings from two decades of scholarship. ***Review of Educational Research***, *74*(3), 255–316.

Yunus, M. M., Nordin, N., Salehi, H., Embi, M. A., & Salehi, Z. (2014). Future of ICT as a pedagogical tool in ESL teaching and learning. ***Research Journal of Applied Sciences, Engineering and Technology***, *7*(4), 764-770.

Zhao, Y., Pugh, K., Sheldon, S., & Byers, J. L. (2002). Conditions for classroom technology innovations. ***Teachers College Record****, 104*(3), 482-515.

Zhao, Y., & Frank, K. (2003). Factors Affecting Technology Uses in Schools: An Ecological Perspective. ***American Educational Research Journal****, 40*(4), 807-840.