

## Effects of Video-Enhanced Language Teaching on the Thai EFL Teachers' Low VBI Competency

Chalermsep Karanjakwut\* and Passapong Sripicharn

Faculty of Liberal Arts, Thammasat University, Thailand

Corresponding author: Chalermsep Karanjakwut, E-mail: chalermsep.ka@bsru.ac.th

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### ABSTRACT

This study investigated the level of Video-Based Instruction (VBI) competency of Thai EFL teachers through training using the Video-Enhanced Language Teaching (VELT) model and examined their attitudes towards the training using the VELT model. The study group consisted of 30 secondary-level Thai EFL teachers with low VBI competency in Suphanburi province, Thailand, in the 2022 academic year. The study used mixed methods, and the data were collected using the achievement test and the assessment which were analyzed with a paired sample t-test to investigate the effects of the VELT model on developing the low VBI competency of Thai EFL teachers. The questionnaire data were analyzed using descriptive statistical analysis methods and the interview data using thematic analysis. The results showed that the VELT model had significantly improved the low VBI competency of Thai EFL teachers during the training period, showing a strong positive correlation ( $r = .070, p < .001$ ). The assessment also indicated that Thai EFL teachers showed significant development in technology, pedagogy, and content related to English language teaching with a small positive correlation ( $r = 0.220, p < .001$ ) between their initial competency levels and the changes observed after training. The overall satisfaction towards the training using the VELT model was at a high level ( $M = 4.25$ ) with the highest domain being the learning environment ( $M = 4.54$ ). The interview revealed that interaction, learning environment, instruction, preference, obstacles, challenges, adaptation, preparation, and evaluation connected the use of the VELT model to ELT classes given by low VBI competency Thai EFL teachers. Four emerging data that stood out from the interview were the school's policy, materials, teaching styles, and students' motivation. The results have useful implications for the future implementation of videos for English language teaching.

**Key words:** Video-Enhanced Language Teaching, VELT Model, Video-Based Instruction, VBI Competency, Model Development, Professional Development

### INTRODUCTION

The advancement of technology has led to the emergence of Social Networking Sites (SNSs) such as mySpace, Twitter, LinkedIn, Facebook, and YouTube. All of which have been used to enhance and facilitate learning and teaching. Moreover, Research has shown that incorporating technology in the instruction of adolescent students yields greater success than Grammar Translation Method (Karanjakwut, 2010; Kayan, & Aydin, 2020). According to the National Statistic Office's (2018) report, 28.3% of the Thai population use computers, 56.8% use mobile phones, and 89.6% of the population access the Internet. Child and pre-adolescent users ranging in age from 6 to 14 years old exhibited a higher level of computer literacy than any other ages (National Statistic office, 2018). The prevalence of video content on online platforms such as YouTube has gained significant traction in Thailand, positioning it as the second most widely utilized social media platform. Boonbandol and Soontornwipat (2017) found that the incorporation of YouTube videos was

effective in augmenting the speaking abilities of vocational students. However, there is a lack of initiative from educators to incorporate this trend into their pedagogical practices. According to Ghavifekr et al. (2016), the primary challenges encountered by educators were lack of effective training and limited time, and they needed pedagogical training (Becta, 2004, as cited in Ghavifekr et al., 2016).

From the statistical numbers, it is clear that videos always come into plays for most of the SNSs, can be reached by all ages of people, and are applicable to English language teaching. Tracing back to the 1960s, the "Video English Course" was developed by the British Council in collaboration with the BBC and used in teaching English conversation skills (Richards & Rodgers, 2014). Since then, videos have gained ground from people in every corner of the world. Particularly in educational contexts, videos have been used as a medium of instruction or video-based instruction (VBI). Teachers who apply VBI to facilitate their teaching need to be able to critically analyze, understand and create videos as a medium

of instruction which is called Video Literacy. Video literacy, hence, becomes essential for effective learning with certain characteristics, such as visual literacy (Hobbs, 2010) involving the ability to interpret and understand images, graphics and symbols, media literacy (Hobbs, 2010) involving the understanding of techniques used in video production, multimodal literacy (Walsh, 2013) involving the ability to understand and integrate information from multiple modes effectively, Critical thinking (Hobbs, 2010) involving recognizing bias, evaluating sources and identifying different perspectives in videos, and digital citizenship (Hobbs, 2010) involving the awareness of copy right laws, privacy issues and the responsible sharing and consumption of videos in online environments.

In the 21<sup>st</sup> century, videos have been developed from types to CDs and from CDs to online, using videos as a medium of instruction has also changed from in-the-classroom to online learning environment, and the characteristics of video literacy has become online video literacy which includes digital navigation (Hobbs, 2011) involving the familiarity with using video players, searching functions, playlists and other features, media evaluation (Mihailidis & Cohen, 2013) involving the ability to access the quality of videos, consideration of the expertise of the creators, and evaluation of potential biases or misleading information, interactive engagement (Guo et al., 2014) involving making use of features like comments, annotations, quizzes or interactive elements within videos to enhance understanding and participation in a lesson, multimodal integration (Boling et al., 2017) involving the ability to integrate and make connections between different modalities to deepen understanding and success additional information, and online communication (Graf et al., 2009) involving sharing video links, participating in video discussions, or collaborating on video projects with peers or teachers.

Hence, videos have been used as a medium for instruction in ELT classrooms with several benefits, such as increasing students' motivation (Bravo et al., 2011), attracting students' attention (Wang, 2014), increasing students' retention (Geri, 2012), and promoting other pedagogical approaches, like flipped learning (Long et al., 2016) and blended learning (Shih, 2010). Therefore, the significance of video-based instruction is evident in its ability to cater to different learning styles (Choi & Johnson, 2005) and preferences (Wolfe et al., 2017), as well as its potential for enhancing students' language proficiency through exposure to authentic language use (Herron et al., 2006). Furthermore, video-based instruction can also facilitate the development of critical thinking and analytical skills (Carmichael et al., 2021), as students are required to interpret and analyze visual information in order to comprehend the content presented in the videos (Choi & Johnson, 2006). However, little research has been conducted on the subject of in-service teachers using video software to teach English. It found that they are insufficiently skilled in the video-based instruction, particularly in terms of shortage of training and limited time and pedagogical training (Ghavifekr et al., 2016). Therefore, using the VELT model (training package) will be beneficial and assist the teachers in becoming competent and confident users.

In this context, the research aimed to investigate the level of technological literacy of Thai EFL teachers with a low VBI competency during the training using the VELT model. This research also aimed to examine the teachers' attitudes towards the training using the VELT model. The research questions were as follows:

1. To what extent does the VELT model (training package) develop the low VBI competency of Thai EFL teacher during the training period?
2. What are the teachers' attitudes towards training using the VELT model?

## LITERATURE REVIEW

The VELT model was underpinned by the beliefs in the video-related theoretical concepts, which were multimedia learning theory, social cognitive theory, technology acceptance model, and communicative language teaching. The model was also constructed in consideration of Edgar Dale's Cone of Learning Experience, ASSURE model, and TPACK framework for teachers' professional development for adult learning.

### Video-Related Theoretical Concepts

#### *Multimedia learning theory*

The Multimedia Learning Theory combines various media types (Mayer, 2009) to create multimedia materials. It has become more common in two areas: video-based instruction and video-enhanced language teaching. The benefits of using videos include increased student engagement, improved learning outcomes, and the ability to communicate difficult concepts. Instructors should consider the principles of multimedia learning theory such as the coherence principle and the modality principle when creating instructional materials.

#### *Social cognitive theory*

Video-based instruction and video-enhanced language teaching are two distinct methods of teaching. Video recordings can be used to provide genuine language input, demonstrate effective communication techniques, or exhibit cultural customs. The Social Cognitive Theory (SCT) posits a multifaceted learning process that involves the interplay of three components: the environment, the individual, and their behavior (Bandura, 1986). Empirical studies have demonstrated that the use of video-than-equity language teaching can yield positive outcomes in enhancing the language proficiency of students.

#### *Technology acceptance model*

The Technology Acceptance Model (TAM) is a theoretical framework that explains individual acceptance and adoption of technology. TAM posits that an individual's intention to use a particular technology is determined by two key factors: perceived usefulness and perceived ease of use. Venkatesh and Davis (2000) proposed the TAM2 model which incorporated additional factors such as subjective norm, image, job relevance, output quality, and result demonstrability. A study

by Moon and Kim (2001) found that perceived usefulness and perceived ease of use significantly influenced the intentions of students to use the e-learning platform.

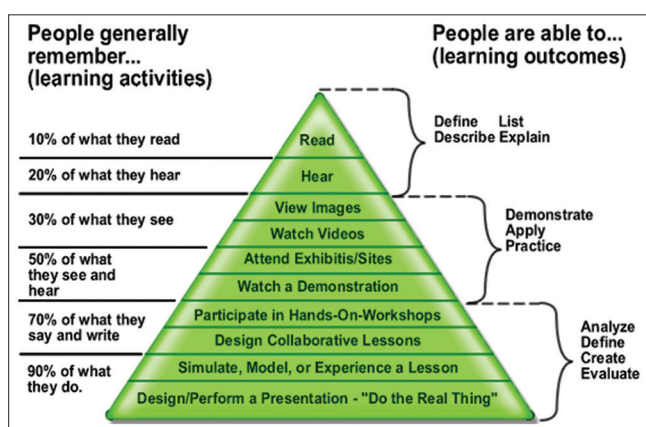
### *Communicative language teaching*

The Communicative Language Teaching (CLT) approach is a prevalent methodology in language instruction that prioritizes communication as the principal objective in language acquisition (Richards & Rodgers, 2014). Video-based instruction and video-enhanced language teaching can facilitate language acquisition and foster social interaction, thus enhancing knowledge acquisition and promoting learner comprehension of the practical applications of the subject matter. Moreover, video-enhanced language teaching can provide learners with exposure to diverse accents, dialects, and cultural perspectives which can help them acquire communicative competence, critical thinking, and media literacy skills.

### **Instructional Design for Videos**

#### *Edgar dale's cone of learning experience*

The Cone of Learning Experience is a theoretical framework used in instructional design to facilitate the identification and application of instructional media. Video-based instruction can serve as a potent instrument for enhancing learning outcomes and improving information retention particularly when it is developed based on robust instructional design principles. Instructional design is a systematic approach to developing educational materials and experiences that are engaging, interactive, and tailored to the needs of learners. Dale's Cone of Experience posits that video-based instructional materials can serve as a viable means of enhancing learner engagement and augmenting retention rates. This study reviews two instructional design models to identify the most suitable approach for the development of the VELT Model (Figure 1).



**Figure 1.** Edgar Dale's Cone of Learning Experience  
Edgar Dale's Cone of Learning Experience is a model relevant to instructional design and learning processes. From *Wikimedia Commons*, by J. Anderson, 2012, (<https://elearningindustry.com/cone-of-experience-what-really-is>). Copyright 2012 by Creative Commons Attribution-Share Alike 3.0 Unported

### *ASSURE model*

The ASSURE model is a well-established instructional design model that provides a systematic approach to designing and delivering technology-based instruction with the aim of achieving optimal effectiveness. It involves analyzing learners, selecting appropriate objectives, using effective strategies and materials, incorporating technology, and evaluating the effectiveness of instruction. The model comprises six sequential stages aimed at ensuring optimal instructional effectiveness including learner analysis, articulation of objectives, selection of media and materials, use of media and materials, mandated learner participation, and critical evaluation and revision of the instructional materials. Numerous academic inquiries have been conducted to examine the efficacy of the model in devising and executing video-oriented pedagogy. Arbaugh and Duray (2002) employed the ASSURE model to develop and execute video-based instructional programs (Figure 2).

The model yielded a statistically significant enhancement in student learning outcomes when compared to conventional text-based instruction. It has been used to devise and execute video-based instruction in diverse educational contexts, such as K-12 schools, higher education, and corporate training. The six stages of the model offer a methodical strategy to guarantee that the design of instruction is centered on the learner, driven by objectives, and enriched with media.

### *TPACK model*

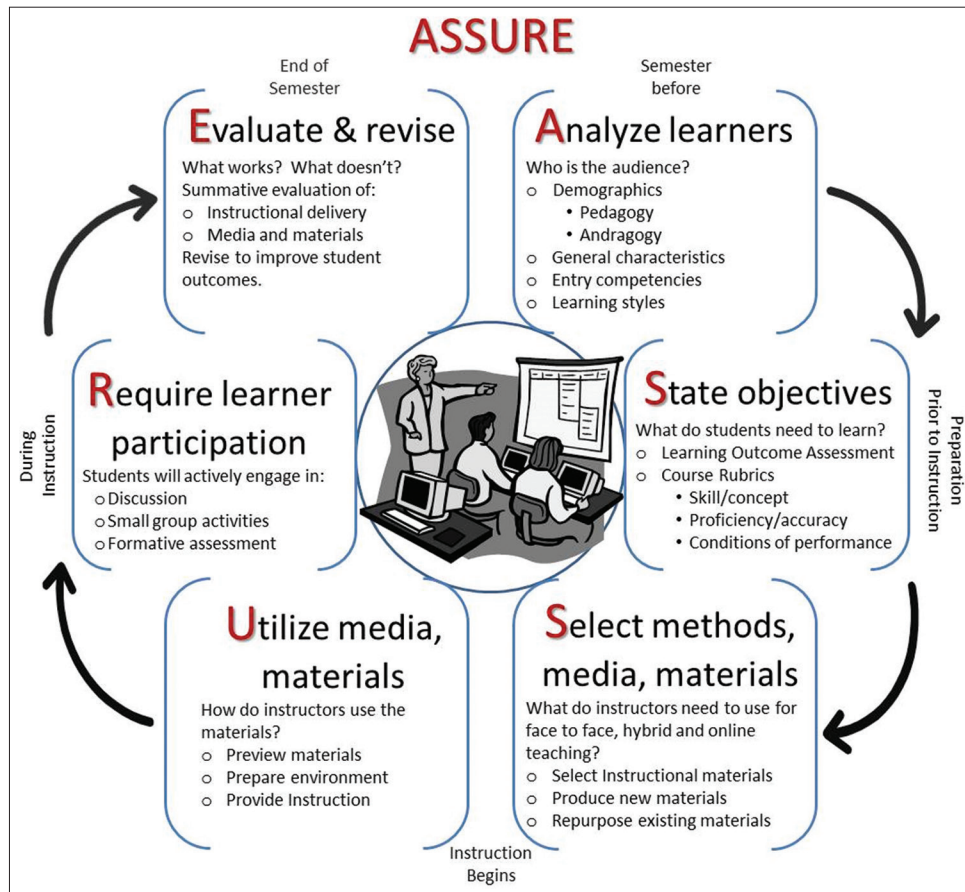
The Technological Pedagogical Content Knowledge (TPACK) model is a framework used to guide the integration of technology in teaching and learning. It emphasizes the importance of considering both what is taught and how it is taught when selecting technological tools to enhance the learning process. The construct of Content Knowledge (CK) pertains to the extent of the teacher's understanding and mastery of the subject matter. This study examines the relationship between various language competencies, including English grammar, vocational skills, vocabulary, listening comprehension, reading comprehension, and writing proficiency as identified by CK. Pedagogical knowledge (PK) is the understanding and application of teaching and learning principles and strategies.

The evidence suggests that pedagogical content knowledge (PCK) is a critical skill set for educators, enabling them to effectively identify and leverage technology to support their unique pedagogical approach. Mishra and Kohler (2006) posited that Technological Pedagogical Knowledge (TPK) is a set of competencies that enables educators to identify and use the most suitable technological tools to facilitate students' acquisition of the necessary knowledge and skills. The present investigation employed technological knowledge (TK) to use customized and generated videos as pedagogical tools in conjunction with instruction on various online software platforms. Being educators, the participants opted to focus on content knowledge (CK). This study investigates the extent to which Thai EFL teachers possess the

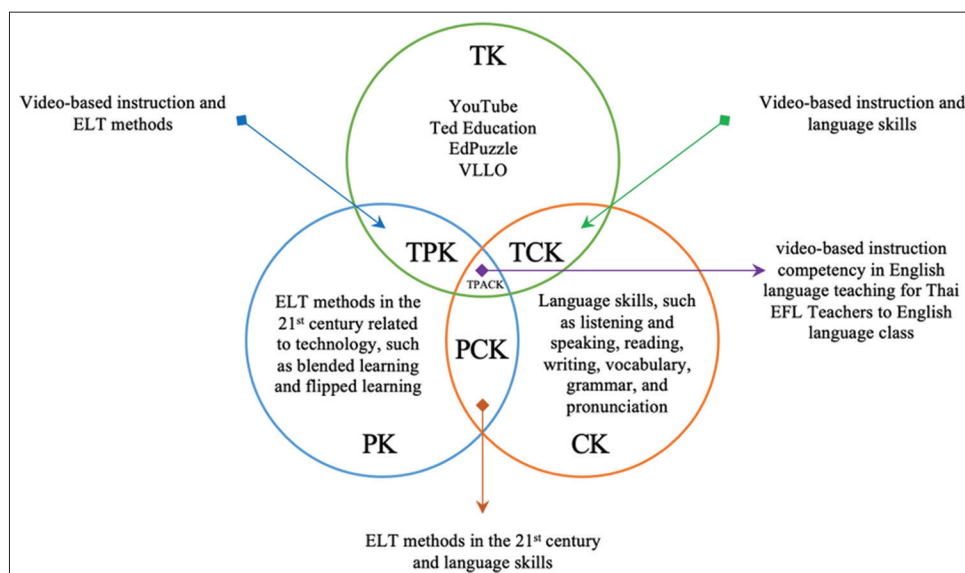
technological pedagogical and content knowledge (TPACK) required for effective video-based instruction in English language teaching (Figure 3).

It is important for educators to possess a profound comprehension of the language proficiencies being instructed,

pedagogical approaches, and technological resources employed to produce and disseminate instructional videos. Thus, training programs for Thai EFL teachers with deficient VBI competencies are needed to enhance their skills.



**Figure 2.** The ASSURE Model  
The ASSURE Model is an instructional design model related to the use of media. From *GotoKnow*, by W. Tosanan, 2020, (<https://www.gotoknow.org/posts/675135>). Copyright 2005-2023 by Piyawattana Co.Ltd



**Figure 3.** TPACK Model of the Study  
Photo of TPACK Model. Own work

## Teachers' Professional Development of Adult Learning

### *Factors for effective professional development for teachers*

Professional development is essential for teachers to be able to cater to the varied needs of adult learners. Research has identified a collaborative and participatory approach as a key factor in facilitating effective professional development. Reflective practice is a pedagogical approach that entails educators engaging in introspection and self-evaluation of their instructional techniques. Along with Jacobs and Garner (2016), Cavanaugh and Blomeyer (2013) suggest that reflective practice, technology integration, and a collaborative and participatory methodology are the most effective approaches to professional development for educators of adult learners. These programs have the potential to equip teachers with the requisite skills and knowledge to cater to the varied needs of adult learners.

### *Phases of teachers' professional development for adult learning*

Providing efficient professional development opportunities for educators of adult learners is essential to ensuring they possess the requisite competencies and expertise to cater to the multifarious requirements of their pupils. Research has shown that training programs that are collaborative, participatory, and centered on fostering a culture of ongoing learning are deemed effective. The second phase of professional development is known as the teaching phase. The VELT model underwent a two-phase development process with the initial stage consisting of a training programs designed to enhance the VBI competency of educators. The second stage, pedagogy, pertains to the efficacy of the instructor's pedagogical practices after undergoing training. Research has indicated that optimal professional development for educators of adult learners necessitates a dual approach involving both a preparatory and an instructional phase.

### **Previous Studies in Video-Based English Instruction in the Thai Context**

This study aims to investigate the professional development of Thai English as a Foreign Language (EFL) teachers who exhibit low levels of Vocabulary-Based Instruction (VBI) competency. A research study conducted by Pimdeedee et al. (2019) revealed that educators who underwent professional development programs exhibited elevated levels of implementation of VBI in comparison to their counterparts who did not receive any training. Chaiprasit et al. (2017) conducted a study to investigate the impact of a professional development program on the use of VBI among Thai EFL teachers. Kantamara and Pattanapichetpong (2017) conducted a study to examine the effects of a professional development program on English as a Foreign Language (EFL) instructors in Thailand. The research revealed that the program was efficacious in enhancing the VBI proficiency of educators, as evidenced by notable enhancements in domains such as instructional design, media curation, and pedagogical implementation.

Saengboonmee and Yutdhana (2019) conducted a research study to investigate the efficacy of a professional development program designed for English as a Foreign Language (EFL) teachers in Thailand who demonstrated a low level of Vocabulary-Based Instruction (VBI) competency. The research study yielded results indicating that the program was efficacious in enhancing the VBI proficiency of educators. Taweasuk and Lertputtarak (2021) conducted a study to examine the effects of a professional development program on the attitudes of Thai EFL teachers towards VBI. The findings indicate that professional development initiatives have the potential to enhance the VBI proficiency of Thai EFL educators, particularly for those who exhibit sub-par initial proficiency levels.

## METHODOLOGY

### Study Group

The study recruited 30 Thai teachers of English from 27 schools under the supervision and administration of Suphanburi Primary Educational Service Area Office 2 (SPESAO 2) in Suphanburi province. They were teaching English in the secondary-school level ranging from Matthayom 1 (Grade 7) to Matthayom 3 (Grade 9) in the 2022 academic year consisting of three male teachers and 27 female teachers. An online survey link which included two sections pertaining to computer literacy, technological proficiency, digital competency, and video-based instruction (VBI) was used to invite potential participants. Fifty-two Thai EFL teachers expressed their interest in participating in the research and completed an online survey. Many of the participants were classified as expert and proficient users, indicating their capability in using computers, technology, and digital tools. However, 30 participants were classified as operational or illiterate users and were selected to attend the research.

### Instruments

#### *Achievement test*

The achievement test helped to determine the significant differences in technological literacy levels among Thai EFL teachers with a low VBI competency before and after receiving training with the VELT model. Therefore, the tests used were both pre- and post-tests. A test was developed exclusively for this study, as the tests developed in previous research did not seem suitable for Thai school contexts. The test consisted of 40 multiple-choice questions about computer and technology knowledge and usage as well as awareness of choosing and using technology and media for class management. The results of the achievement test answered the first research question: "To what extent does the VELT model (training package) develop the low VBI competency of Thai EFL teacher during the training period?"

#### *Assessment form*

The assessment form called "Assessment Form of the Competence in Video-Enhanced Language Teaching Model"

covered the three topics of the training: 1) VELT-Related ELT Approaches, 2) VELT-Based Video Adaptation, and 3) VELT-Based Video Production. The statements in this form were constructed according to the TPACK framework. The result of the self-assessment supported the achievement test, and certainly the first research question. The assessment form was given to the teachers three times: Before training (Week 1) by teachers, after training (Week 8) by teachers, and after given instruction (Week 9) by the researcher.

### Questionnaire

The questionnaire used in this study was given to teachers. It included 27 items questioning preparation, instruction, evaluation, challenges, and suggestions. The study employed a five-point Likert scale to measure satisfaction levels across various dimensions of the model including interaction, learning environment, adaptation, preference, obstacles, preparation, instruction, evaluation, and challenges. The questionnaires aimed to examine the teachers' reaction and attitude towards teaching with the VELT model. The questionnaire items were validated with the index of item objective congruence (IOC) by three experts in the fields of education, English language, and technology. Then, the items will be reconsidered and reconstructed according to the experts' suggestions. After reconstruction, the questionnaire was presented to the teachers as soon as the teaching phase was completed.

### Interview

An interview was conducted to examine the attitude of Thai EFL teachers with a low VBI competency that were trained with the VELT model. Interviews were conducted with six teachers from different schools in Suphanburi province. All of the teachers were purposively selected based on the research objectives and research questions which focused on low VBI competency Thai EFL teachers consisting of one male teacher and five female teachers. Their ages ranged from 29 years to 51 years old. All of them had minimum six years up to 30 years of teaching experiences, but none of them had the administrative position. The six teachers were those who join the whole process of the research and were chosen from the results of before-training assessment and after-training assessment. The three teachers who assessed themselves as gaining more from the course when comparing their before- and after- training assessments along with another three teachers who rated themselves as gaining the least progress were selected and invited to the interview. As it was a semi-structured interview, it was divided into two sections. The first section contained four preset questions about attitudes, motivation and challenges towards teaching with the VELT model. The second section was for emerging questions which the research raised, and these questions were asked to the participants as they are interesting, important or useful for the research. Three experts in the fields of education, English language, and technology validated the interview questions using the index of item congruence (IOC) and content validity. The questions were reconstructed

according to the experts' suggestions. After reconstruction, they were asked to the teachers as soon as the teaching phase was complete.

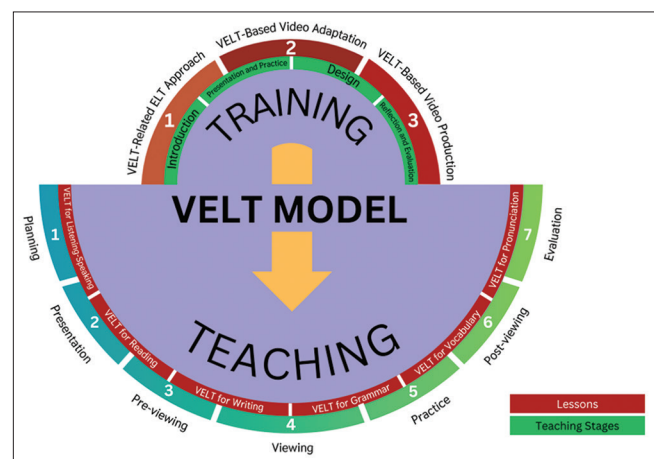
### Stages of Research

The research was conducted in two phases: 1) The development of the Video-Enhanced Language Teaching Model phase, and 2) the implementation of Video-Enhanced Language Teaching Model phase.

### The development of video-enhanced language teaching model phase

The development of Video-Enhanced Language Teaching (VELT) is an innovative teaching model for low VBI teachers. The model is divided into two parts: training and teaching. The VELT model had been developed by the reviews of the existing research on video-based instruction and the integration of videos in language teaching. The initial VELT model was implemented so verify its effectiveness. However, the pilot results of the implementation revealed that the teachers were proficient in computer, technological and digital competence. Therefore, the VELT model was refined by fading away the computer, technological and digital training, but remaining the training using videos only. The refined VELT model is shown in Figure 4.

The refined VELT model was used in the main study by modifying instructional materials, adjusting the pedagogical approach, or incorporating videos with teaching English in the classrooms using both adaptation and production to enhance the model's effectiveness. The model was divided into two parts: the training - which had seven steps that explained everything about technological literacy - and teaching which included seven steps: planning, presentation, pre-viewing, viewing, practice, post-viewing, and evaluation. To enhance retention and transfer, the teaching part provided opportunities for the Thai EFL teachers with a low VBI competency to apply the knowledge and skills learned



**Figure 4.** The Refined VELT Model

The refined VELT model was developed for the initial phase of the development, and it was used in the main research. Own work

in the VELT training program to their teaching practice. This also provided the teachers with ongoing support and resources such as video-enhanced lesson plans, teacher communities, and coaching.

### ***The implementation of video-enhanced language teaching model***

#### ***1. Research design***

Prior to design the research, conduct and collect the data, this research was proposed, reviewed and approved by the Human Research Ethics Committee of Thammasat University, Bangkok, Thailand (Certificate of Approval No: 042/2566) in terms of both research project and research instruments. In this regard, the study was mixed method. To elaborate, the study was carried out using the one group pretest and posttest quasi-experimental design to investigate the technological literacy of Thai EFL teachers with low computer literacy before and after training using the VELT model (Table 1). As a result, this was a quantitative research method. Furthermore, for the quantitative data gained from pre- and post-tests, pre- and post- assessments, and questionnaire, the instruments had been validated the index of items-objectives congruence (IOC) by the three experts in three different related fields which were English language teaching, educational technology, and education to verify the instruments before utilizing them with the participants. Also, pseudonyms were used to collect and analyze the data.

Additionally, the strategies used by Thai EFL teachers with low computer literacy while implementing the VELT model is examined during their teaching period. The findings of this data helped ensure the empirical effectiveness of the VELT model. As a result, the study was also a qualitative research method, thus making it a mixed method study. For the qualitative data gained from the interview, the validation of IOC had also been conducted before being used. After getting data, in order not to bias the data, the interview was recorded and transcribed. The research employed the member checking technique to listen to the record and read the transcription make sure its accuracy of data. Then, the draft of the report was sent back to the six interviewees to verify its findings. Moreover, the teachers' real names were replaced by the codes for research report.

#### ***2. Research procedure***

The main research started with introducing the teachers to the research and informing them of the research procedure. The details of the research orientation and procedure were also presented. The training phase lasted for eight weeks and consisted of 18 hours which included three lesson plans: VELT-Related ELT Approaches, VELT-Based

Video Adaptation, and VELT-Based Video Production. The VELT-related ELT approaches aimed to introduce English Language Teaching approaches that could be incorporated with video-enhanced language learning. The VELT-based video adaptation and VELT-based video were similar, but the difference was about how teachers can adapt or produce videos according to the VELT model. The remaining hours were spent training these teachers on how they can integrate videos with language skills. The study progressed to its second phase which involved the implementation of the VELT model for instructional purposes. The research methodology included self-assessment and questionnaires administered to all teachers as well as in-depth interviews with two selected teachers who demonstrated teaching skills during weeks nine and ten.

#### **Data Collection**

The researchers gathered data by administering a pretest to teachers to assess their proficiency in computer literacy, technological literacy, program and application literacy, and pedagogy. The data was obtained through self-assessment which was conducted during the researcher's visit to the teachers' school during Week 1. The subsequent dataset was obtained from questionnaires and interviews.

#### **Data Analysis**

The data was analyzed according to the research instruments in each research question. For research question number one, the achievement test and self-assessment form were used to collect data. For research question number two, questionnaires and interviews were used. The questionnaire was used to examine the teachers' attitudes in various aspects towards their training using the VELT model. Descriptive statistics were used to summarize the data. The interviews were analyzed qualitatively using thematic analysis to examine the teachers' attitudes, prior knowledge, experience, implementation, and challenges faced during their training using the VELT model.

The data from the interview was sent through the coding procedure, the first step of which is the open coding step (Strauss & Corbin, 1990). The interviews were originally transcribed verbatim in Thai and then translated into English. Next, the English-translated transcripts were read by the researcher, annotated, and then their responses were summarized according to theories or emerging themes. From the open coding step, there are initial codes in the form of sentences. Then the next step is the axial coding where the researcher looked for overlapping or similar categories, refined categories, allocating each category with colored highlights, and irrelevant sentence coding was then cut. The final coding is shown in Table 2 below in correlation with the

**Table 1.** One group pretest and post-test quasi-experimental design

	<b>Pretest</b>	<b>Treatment</b>	<b>Posttest</b>	<b>After training</b>
VELT Model	O <sub>1</sub> Pretest Pre-assessment	X <sub>1</sub>	O <sub>2</sub> Post-test Post-assessment	Questionnaire Interview

**Table 2.** Final coding and initial coding of the emerging data from the interview

Final Coding	Initial Coding
School policy connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers.	<ul style="list-style-type: none"> <li>• Restriction in using electronic devices, like smartphones.</li> <li>• Permission is needed before using smartphones.</li> </ul>
Material connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers.	<ul style="list-style-type: none"> <li>• Present classroom materials, like commercial textbooks, have only audio, no pictures.</li> </ul>
Student motivation connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers.	<ul style="list-style-type: none"> <li>• Motivation has a strong influence for students' learning.</li> </ul>
Teaching style connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers.	<ul style="list-style-type: none"> <li>• Teaching with videos is more suitable for primary level.</li> <li>• Teaching styles of videos affect attention drawing of students.</li> </ul>

pre-set themes as categorized in the Appendix which consists of four principles and nine aspects. After final coding, it indicated that *interaction, learning environment, instruction, preference, obstacles, challenges, adaptation, preparation, and evaluation* connects the use of VELT model with the pre-set themes Social Cognitive Theory (Bandura, 1977), Technology Acceptance Model (Davis, 1989), Adult Learning Theory (Merriam & Bierema, 2014), and Assessment for Learning (Black, Harrison, Lee, Marshall, & William, 2003) by low VBI competency Thai EFL teachers.

### Research Ethics

The researcher implemented several measures to ensure adherence to research ethics in *The Development of Video-Enhanced Language Teaching for Low VBI Competency Thai EFL Teachers: From Training to Teaching*. First, the researcher obtained permission from the school director and informed the participating teachers that they were taking part in a study. Additionally, all data collected from participants was kept confidential and securely stored in a folder that only be accessed using the researcher's password. These ethical considerations were put in place to protect the well-being and rights of the study participants while also allowing the researcher to collect valuable data to inform the development of video-enhanced language teaching for low VBI competency Thai EFL teachers.

## RESULTS

### Research Question 1: To What Extent Does the VELT Model (Training Package) Develop the Thai EFL Teachers' Low VBI Competency During Training Period?

To answer this question, two instruments were used to analyze the data: achievement test (pretest and post-test) and an assessment form completed by the teachers. The achievement test was used in Week 1 and Week 8 to compare the difference in the development of the teachers' VBI competency. The assessment form was used for both pre- and post-assessment also in Weeks 1 and 8 to support the findings of the achievement test. The research design of Research Question 1 is shown in Table 3.

Consisting of both a pre- and post-test, the achievement test aims to investigate the level of technological literacy of Thai EFL teachers with a low VBI competency before and after the training using the VELT model. Both pre- and

**Table 3.** A comparison of the pre- and post-test in technological literacy of low VBI competency Thai EFL teachers

	n	M	SD	t	df	p
Pretest	30	19.23	5.62	-6.71	29	0.000*
Post-test	30	29.63	4.74			

\* $p < 0.001$

post-test scores were calculated by using a paired samples t-test (because the sample was the same group) and also calculated by correlation analysis to explore their relationship between pretests and post-tests of technological literacy of low VBI competency Thai EFL teachers. The results are illustrated above in Table 3.

As shown in Table 3, the paired sample t-test revealed a significant difference between the pretest ( $M = 19.23$ ,  $SD = 5.62$ ) and post-test ( $M = 29.63$ ,  $SD = 4.74$ ) scores where  $t(29) = -6.71$ ,  $p < .001$ . These findings indicate that the VELT model (training package) had significantly improved the low VBI competency of Thai EFL teachers during the training period. Moreover, in order to assess the relationship between the pretest and post-test scores, a correlation analysis was performed as shown below in Table 4.

From Table 4, the Pearson Correlation Coefficient between pretest and post-test suggested that there is a strong positive correlation ( $r = 0.70$ ,  $p < .001$ ). This suggests that students who had higher scores in the pretest also tended to have higher scores in the post-test.

To support the achievement test's findings, the assessment form was used with an aim to explore the low VBI competency of Thai EFL teachers in their knowledge on technology, pedagogy and content related to English language teaching before and after the training using the VELT model. Therefore, it was used during Week 1 before the training started and during Week 8 after the training.

Both a paired sample t-test and correlation analysis were conducted to examine the differences between the pre-assessment and post-assessment scores, as well as the relationship between these scores. The findings of the pre-assessment and post-assessment scores are shown in Tables 5 and 6.

From Table 5, the mean score of post-assessment was 3.36 ( $SD = 0.52$ ) while the mean score of pre-assessment was 1.98 ( $SD = 0.82$ ). The  $t$ -value was 10.91 with 29 degrees of freedom resulting in a highly significant difference between the pre-assessment and post-assessment scores ( $p < .001$ ). These findings indicate Thai EFL teachers



**Table 4.** Correlation analysis of the pre- and post-test technological literacy of low VBI competency Thai EFL teachers

	Pretest	Post-test
Pretest		
Pearson Correlation	1	0.336
Sig. (2-tailed)		0.070
N	30	30
Post-test		
Pearson Correlation	0.336	1
Sig. (2-tailed)	0.070	
N	30	30

**Table 5.** The comparison of pre- and post-assessment in technological literacy of low VBI competency Thai EFL teachers

	n	M	SD	t	df	p
Pre-assessment	30	1.98	0.82	10.91	29	0.000*
Post-assessment	30	3.36	0.52			

\*p&lt;0.001

**Table 6.** A correlation analysis of the pre- and post-assessment in technological literacy of low VBI competency Thai EFL teachers

	Pretest	Post-test
Pre-assessment		
Pearson Correlation	1	0.231
Sig. (2-tailed)		0.220
N	30	30
Post-assessment		
Pearson Correlation	0.231	1
Sig. (2-tailed)	0.220	
N	30	30

had significant development in scores from the pre-assessment to the post-assessment suggesting that the training had a positive impact on the participants' competency in technology, pedagogy, and content related to English language teaching. The results underlined the effectiveness of the training in integrating technology into their teaching, equipping the teachers with innovative pedagogical knowledge, and enhancing the teachers' content knowledge on the use of well-structured lesson plans for instruction.

Moreover, when considering the competency levels of understanding some ELT approaches related to video-based instruction and integrating videos with English language teaching, including adaptation, production, and VELT teaching, the mean score of pre-assessment ( $M = 1.98$ ) showed that the teacher understood little about video-related ELT approaches and cannot use any video software before training. This is also supported by the comments from some teachers in the opinion section of the pre-assessment. For example, one said, "I haven't used any programs, so I don't understand them all." (ET16). Others wrote comments such

as "My technology skill is not good." (ET23); "My technology skill is not good, please go slowly." (ET26); and "I want to use technology, but I'm not good at that" (ET 30).

However, after the training, the mean score of post-assessment ( $M = 3.36$ ) showed that the teacher understood video-related ELT approaches better and more profoundly and can use any videos software like a professional. This is also supported by the comments from some teachers in the opinion section of the pre-assessment. For example, they commented "I know more about technology about VDO and get varieties about knowledge." (ET8); "I can select appropriate videos for VELT-based language teaching." (ET19); and "I can produce videos for teaching my students." (ET22).

Additionally, in order to assess the relationship between the pre-assessment and post-assessment scores, a correlation analysis was performed as shown in Table 6.

From Table 6, the correlation analysis showed a small, yet positive correlation between the pre-assessment and post-assessment scores with  $r = .220$ ,  $p < .001$ . This indicates that participants who scored higher in the pre-assessment tended to have higher scores in the post-assessment as well. The results suggest that the training using the VELT model led to significant improvement in the teachers' scores, and there was a positive correlation between their initial competency levels and the changes observed after training.

When considering each statement of the assessment form, it was found that the teachers declared that they could adapt videos effectively for VELT-based language teaching. Further, the teachers stated they could integrate VELT-based videos effectively into their language teaching. Moreover, the teachers also claimed that they could also use VELT-based video materials effectively in their language teaching. These three statements received the highest self-assessment after training ( $M = 3.57, 3.50, 3.40$  respectively). (See the table labeled "The Principles, Aspects and Items of the Questionnaire" in the Appendix). This indicates that teachers can adapt and integrate video using the VELT model in their English classes.

In contrast, the three lowest mean scores of the post-assessment are the statements "The teachers could explain the main principles of VELT-related ELT approaches"; "The teachers could apply VELT-related ELT approaches effectively in my language teaching"; and "The teachers could write a lesson plan using the VELT model" ( $M = 3.23, 3.23, 3.20$  respectively). This indicates that the teachers had moderate understanding towards the English language teaching approaches but may not be able to apply the approaches through teaching using the VELT model.

In conclusion, the findings of this study provide evidence to support the effectiveness of the VELT model in developing the low VBI competency of Thai EFL teachers during the training period. Using a paired sample t-test, the achievement test results revealed a significant difference between the pre-test and post-test scores. This indicates a substantial improvement in the teachers' technological literacy. Additionally, the correlation analysis demonstrated a strong positive correlation between the pretest and post-test scores, suggesting that higher initial competency levels were associated with greater

improvements after the training. These findings were further supported by the assessment form, which indicated a significant development in the teachers' competence in technology, pedagogy, and content related to English language teaching. The pre-assessment scores indicated a limited understanding and proficiency in video-related ELT approaches, while the post-assessment scores showed a significant improvement and increased confidence in using video software and applying video-based instruction in the classroom. Overall, the results highlight the positive impact of the VELT model on enhancing the low VBI competency of Thai EFL teachers and their ability to integrate technology effectively into English language teaching practices.

### Research Question 2: What Are the Teachers' Attitudes Towards the Training Using the VELT Model and the Application in the Class?

To answer this question, two tools were used to analyze the data: questionnaires and interviews completed by teachers. The questionnaire was used in Week 9 to examine the teachers' attitudes towards the training using the VELT model, and the semi-structured interview was used in Week 10 to examine the teachers' attitudes, application, motivation, and challenges faced in the training using the VELT model. Research Question 2 was analyzed both quantitatively and qualitatively.

The questionnaire included 27 questions related to interaction, learning environment adaptation, preference, obstacle, preparation, instruction, evaluation, and challenges, aims to examine the teachers' attitudes towards the training using the VELT model after the training. The questionnaire was calculated by using frequency for demographic information, mean and standard deviation for the 27 questionnaire questions, and thematic analysis for the open-ended item. The reliability value of the questionnaire was also tested for its quality.

The nine aspects of teaching English with videos through the VELT model were created based on different principles (i.e., social cognitive theory, technology acceptance model, adult learning theory, and assessment for learning).

The questionnaire items were statistically analyzed and interpreted by using the interval table of Saiyot and Saiyot (1995 as cited in Tiang-uan, 2021) as shown in Table 7.

The results of the overall satisfaction towards the training using the VELT model and the application in the class and each aspect of the questionnaire are illustrated in Table 8.

From Table 8, the findings showed that the overall satisfaction towards the training using the VELT model was quite high level ( $M = 4.25$ ). However, when looking through the whole aspect of the questionnaire, the Learning Environment received very high mean scores ( $M = 4.54$ ) showing that teaching English with videos help create the learning environment in the classroom. Highlighting the top three central tendencies, the questionnaire aspects with the highest means were Learning Environment, Interaction, and Instruction with the mean of 4.54 ( $SD = 0.54$ ), 4.48 ( $SD = 0.62$ ), and 4.43 ( $SD = 0.58$ ), respectively. Incidentally, these three aspects are in the principle of social cognitive theory which

**Table 7.** Criteria for mean score interpretation

Mean	Levels of Satisfaction
4.51 – 5.00	Very high
3.51 – 4.50	High
2.51 – 3.50	Moderate
1.51 – 2.50	Low
1.00 – 1.50	Very low

**Table 8.** The overall satisfaction of the questionnaire and each aspect

No.	Questionnaire Aspects*	M	SD	Interpretation
1	Interaction	4.48	0.62	High
2	Learning Environment	4.54	0.54	Very high
3	Adaptation	4.39	0.61	High
4	Preference	4.42	0.65	High
5	Obstacles	3.67	1.04	High
6	Preparation	4.24	0.70	High
7	Instruction	4.43	0.58	High
8	Evaluation	4.34	0.67	High
9	Challenges	3.74	1.13	High
	Overall	4.25	0.38	High

\*See the heading description in the Appendix

emphasizes the role of social interaction and observation in the learning process.

When considering each item of the questionnaire, Item 5, Item 6, Item 3, Item 12, and Item 21 from the questionnaire had the highest means. The mean of Item 5 is 4.67 ( $SD = 0.47$ ). Item 6 has a mean of 4.60 ( $SD = 0.49$ ), followed by 4.57 ( $SD = 0.56$ ) which has the same mean as Item 12 ( $M = 4.5$ ,  $SD = 0.56$ ) and Item 21 ( $M = 4.57$ ,  $SD = 0.56$ ). All these items are also at very high mean levels as shown in Table 9.

As shown in Table 9, Item 3 is in the Interaction aspect, Items 5-6 are in the Learning Environment aspect, Item 12 is in the Preference aspect, and Item 21 is in the Instruction aspect. These five items are specifically interesting not only in terms of their highest satisfaction level, but also in terms of the theories involved, i.e., social cognitive theory and technology acceptance model. Moreover, the overall findings and the specifically interesting findings were supported by the qualitative analysis of the semi-structured interview.

The interview used in this study was a semi-structured interview consisting of four set questions about prior knowledge to the use of videos, experience in the VELT training, implementation of the VELT model, and challenges faced when teaching with the VELT model. The findings of the interview will be described according to the four set questions shown in Section 3.6 (Data Analysis). However, there were four emerging themes which were school policy, material, student motivation, and teaching style. These themes were shown in Table 2.

To elaborate, four themes from Table 2 were determined to be a positive feature in VELT application and helped

**Table 9.** The top five questionnaire items at the highest levels

No.	Questionnaire Items	M	SD	Interpretation
3	I think the VELT model plays an important role in the construction of knowledge through social interaction.	4.57	0.56	Very high
5	I find that the VELT model helps to improve my students' motivation to learn.	4.67	0.47	Very high
6	The VELT model provides a more active learning environment.	4.60	0.49	Very high
12	I want to teach both with and without videos.	4.57	0.56	Very high
21	The VELT model helps me to present information in a more organized manner.	4.57	0.56	Very high

support the effectiveness of the VELT model. Some policies of a school on the use of the smartphone should be revised. The material used in the class should be multimedia. The student motivation should be improved first to persuade their interest in learning English. The teachers' teaching style should be active.

From the findings of the interview, it is clear that interaction, learning environment, instruction, preference, obstacles, challenges, adaptation, preparation, and evaluation connects the use of VELT model to ELT classes by low VBI competency Thai EFL teachers. In this specific context, according to the principles, there are four main themes and nine aspects generated from the principles and found in the final coding as shown in Table 10.

In addition to the themes set in accordance with the pre-set category, there are four emerging themes (or aspects) connecting the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. The first emerging theme is School Policy. The school policy connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. The results of the interviews showed the training would be useless if the schools are still controlling the use of smartphones for learning and teaching. The policy of using smartphones for classroom management should be revised to support learning in the 21<sup>st</sup> century.

The second theme is Materials. Materials are very important to help teachers manage and make the activities more fun, lively, and professional. From the interview, the teachers stated that the present use of textbooks may not be up-to-date and not interesting because there is only audio but no pictures which will help students better understand the lesson.

The third theme is Teaching Styles. Teaching styles from the interview are about how teachers design and position themselves during each step of teaching and the suitability of using videos for each grade level. It is also about how teachers organize the use of videos in each step of teaching. The teachers recommended that the teaching styles will work best when students have full engagement in activities. For example, let the students use their smartphone to participate in the interactive mode of online video software rather than projecting online video on the screen.

The last emerging theme is Student Motivation. Actually, this emerging theme resulted in the analysis during the initial coding and should have been deleted as it was not directly related to the focus of the study. However, the researcher decided to keep it because it is one of the biggest issues gleaned from the interview that provides real insight into

the causes of why students lose interest in English and even other subjects. The teachers stated that even if they have the best materials, media or even videos on-hand, students are not motivated to study in the classes. As a result, it is a waste of time creating the high quality videos. The suggested way to increase motivation is to conduct the needs analysis (maybe in a form of survey) to really get the right information from the students so that teachers can arrange on-demand class activities that are suitable for each and every student. Table 11 summarizes the emerging themes and their description.

The findings of the five specifically interesting questionnaire items as shown in Table 8 are an indication that there are relationships between the results of questionnaire items and the results of interviews. For questionnaire Item 3 "I think the VELT model plays an important role in the construction of knowledge through social interaction" ( $M = 4.57$ ,  $SD = 0.56$ ), the interviews proved that preference and adaptation connect the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. For questionnaire Item 5 "I find that the VELT model helps to improve my students' motivation to learn" ( $M = 4.67$ ,  $SD = 0.47$ ), the interviews proved that student motivation connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. For questionnaire Item 6 "The VELT model provides a more active learning environment" ( $M = 4.60$ ,  $SD = 0.49$ ), the interviews proved that the learning environment connects the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. For questionnaire Item 12 "I want to teach both with and without videos." ( $M = 4.57$ ,  $SD = 0.56$ ), the interviews proved that teaching styles connect the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers. For questionnaire item 21 "The VELT model helps me to present information in a more organized manner" ( $M = 4.57$ ,  $SD = 0.56$ ), the interviews proved that teaching styles connect the use of the VELT model to ELT classes by low VBI competency Thai EFL teachers.

## DISCUSSION AND RECOMMENDATION

### Discussion on the Effect of the VELT Model to Develop the Thai EFL Teachers' Low VBI Competency

The research findings presented in the text suggest that the VELT (Video-Enhanced Language Teaching) model significantly improves the low VBI (Video-Based Instruction) competency of Thai EFL (English as a Foreign Language) teachers during the training period. The achievement test

**Table 10.** Main themes and nine aspects with description generated from the principles

Main Themes	Description of the Theme According to the Principles
Social Cognitive Theory (Bandura, 1977) • Interaction • Learning Environment • Instruction	<ul style="list-style-type: none"> <li>• The role of social interaction and observation in the learning process</li> <li>• Learning by observing others and imitating their behaviors</li> <li>• Acquiring new behaviors, attitudes, and knowledge through social interactions and observation of others which can promote interactive teaching methods, foster positive learning environment, and shape instructional strategies.</li> </ul>
Technology Acceptance Model (Davis, 1989) • Preference • Obstacles • Challenges	<ul style="list-style-type: none"> <li>• Factors that influence users' acceptance and adoption of new technology</li> <li>• Perceived usefulness and perceived ease of use towards using a technology</li> <li>• Users' preferences for a technology can be influenced by their perception of its usefulness.</li> <li>• Obstacles and challenges in technology adoption can arise from factors such as perceived ease of use of technology.</li> </ul>
Adult Learning Theory (Merriam & Bireme, 2014) • Adaptation • Preparation	<ul style="list-style-type: none"> <li>• The role of experience in adult learning in the context of adaptation and preparation</li> <li>• Importance of self-directed learning and adapting to new learning environments</li> <li>• Responsibility for their learning goals and strategies</li> </ul>
Assessment for Learning (Black, Harrison, Lee, Marshall, & William, 2003) • Evaluation	<ul style="list-style-type: none"> <li>• Importance of ongoing feedback and evaluation to support students' learning</li> <li>• Incorporating formative assessment practices in the classroom</li> <li>• Using assessment as a tool for guiding and enhancing students' learning rather solely for judgment or grading purposes</li> </ul>

**Table 11.** Emerging themes and the description generated from the emerging themes

Emerging Themes	Description of the Theme According to the Principles
School Policy	<ul style="list-style-type: none"> <li>• Permission for using electronic devices for learning purposes</li> <li>• Restriction on using electronic devices in a classroom</li> </ul>
Materials	<ul style="list-style-type: none"> <li>• Media having both visual and audio elements rather than pictures or sounds solely</li> </ul>
Teaching Styles	<ul style="list-style-type: none"> <li>• Suitability of implementing the teaching with videos with the proper grade levels (i.e., speed, difficulty, content, etc.)</li> <li>• Teaching styles of videos affect students' learning attention.</li> </ul>
Student Motivation	<ul style="list-style-type: none"> <li>• Less motivation in students' learning affecting the whole process of teaching and learning</li> <li>• Increasing motivation by learning students through conducting needs analysis</li> </ul>

results indicate a significant difference between the pre-test and post-test scores and pre-assessment and post-assessment, thus revealing a substantial improvement in the teachers' technological literacy. The paired samples t-test showed a strong positive correlation between the pretest and post-test scores, suggesting that higher initial competency levels were associated with greater improvements after the training. This is consistent with the findings of Pimdeeet et al. (2019) who discovered that educators who participated in professional development programs demonstrated higher levels of VBI implementation than their counterparts who did not receive training. In addition, educators whose initial proficiency in VBI was limited demonstrated significant

improvement after participating in the professional development initiative.

#### Discussion on the Teachers' Attitudes towards the Training Using the VELT Model

The interview results were categorised into four pre-set themes and four emerging themes. Social cognitive theory, technology acceptance model, adult learning theory, and assessment for learning were the predetermined topics. The four emerging themes are the school's policy, its materials, its teaching methods, and the motivation of its students. Likewise, Kantamara and Pattanapichetpong (2017) examined the effects of a professional development program on English as a Foreign Language (EFL) teachers in Thailand. The research revealed that the aforementioned program had a positive effect on the motivation and engagement of students in the educational setting. This implies the importance of motivation in learning. In addition, a comparison of the findings from the interviews with the results of a questionnaire was also conducted. The results demonstrated a correlation between the questionnaire responses and the findings from the interviews, thus supporting the identified themes.

#### Discussion on the Pedagogical Implication of the VELT Model

The VELT model revealed the effectiveness of the training package in terms of increasing VBI competency and experiences in teaching with the VELT model. Therefore, Thai EFL teachers are very welcome to apply the usefulness of the VELT model to their teaching. However, there are two issues on which teachers should take the results of the VELT model into account. One is teachers' VELT competency. Teachers should consider themselves in terms of technological and VBL competency. If they have high VBI competency, they may spend less time being trained in the VELT

model. In contrast, if they have low VBI competency, they may spend more time being trained in the VELT model. However, no matter how high their VBI competency level is, they must pass the training. Therefore, teacher training is necessary for teachers before making use of it in a real class. The other issue is the VELT stages of teaching. Thai teachers are normally getting used to the classical teaching procedure, which consists of the presentation, practice, production, or warm-up, presentation, practice, production, and wrap-up teaching procedures. However, the VELT stages of teaching are different; there are seven stages of teaching with the VELT model. These stages were specifically designed for teaching with videos, and they had been piloted, analyzed, and adjusted. Therefore, teachers should accept that if they would like to teach with technology, the lesson plan and the teaching practice must be aligned with the VELT stages of teaching.

## CONCLUSION

The VELT (Video-Enhanced Language Teaching) model was found to have a significant impact on the VBI proficiency of Thai EFL (English as a Foreign Language) instructors. The analysis of assessment and achievement tests revealed a statistically significant disparity between the scores obtained in the pretest and post-test, thus indicating a noteworthy enhancement in the technological proficiency of the educators. The findings from the questionnaire indicated that the employment of the VELT model in training was associated with a high level of satisfaction among participants. The findings of the interview can be classified into four primary themes: Social Cognitive Theory, Technology Acceptance Model, Adult Learning Theory and Assessment for Learning. The findings of the interview can also be classified into four emerging themes: School Policy, Materials, Teaching Styles and Student Motivation. The results showed a relationship between questionnaire responses and interview findings, suggesting that the VELT approach is effective in improving Thai EFL instructors' VBI proficiency and their adeptness in integrating technology into their teaching strategies. The VELT model can be applied to be used in the teaching and learning of the 21<sup>st</sup> century of Thai educational context.

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## APPENDIX

### The Principles, Aspects and Items of the Questionnaire

Principles	Aspects	Items
Social Cognitive Theory (Bandura, 1977)	Interaction	<ul style="list-style-type: none"> <li>• I think the VELT model will help me to interact better with my students.</li> <li>• The VELT model allows for more opportunities for student interaction.</li> <li>• I think the VELT model plays an important role in the construction of knowledge through social interaction.</li> </ul>
	Learning Environment	<ul style="list-style-type: none"> <li>• The VELT model creates a more engaging learning environment.</li> <li>• I find that the VELT model helps to improve my students' motivation to learn.</li> <li>• The VELT model provides a more active learning environment.</li> </ul>
	Instruction	<ul style="list-style-type: none"> <li>• The VELT model helps me to deliver instruction more effectively.</li> <li>• I find it easier to explain concepts to my students using the VELT model.</li> <li>• The VELT model helps me to present information in a more organized manner.</li> </ul>
Technology Acceptance Model (Davis, 1989)	Preference	<ul style="list-style-type: none"> <li>• I would like to use videos in my teaching compared to traditional teaching methods.</li> <li>• I find the VELT model to be more effective than traditional teaching methods.</li> <li>• I want to teach both with and without videos.</li> </ul>
	Obstacles	<ul style="list-style-type: none"> <li>• I encounter technical difficulties when using the VELT model.</li> <li>• I find it challenging to apply the VELT model with the class management to increase student engagement.</li> <li>• I struggle with time management when using the VELT model.</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>• I find it challenging to integrate the VELT model into my teaching on a regular basis.</li> <li>• I struggle with keeping up with the latest technology when using the VELT model.</li> <li>• I find it difficult to overcome my own resistance to change when using the VELT model.</li> </ul>
Adult Learning Theory (Merriam & Bierema, 2014)	Adaptation	<ul style="list-style-type: none"> <li>• I am able to adapt to using the VELT model in my teaching.</li> <li>• I find it easy to modify my existing lesson plans to incorporate the VELT model.</li> <li>• I am able to tailor my teaching to meet the needs of individual students using the VELT model.</li> </ul>
	Preparation	<ul style="list-style-type: none"> <li>• I feel well-prepared to use the VELT model in my teaching.</li> <li>• I have received adequate training on how to use the VELT model.</li> <li>• I feel confident in my ability to use the VELT model in my teaching.</li> </ul>
Assessment for Learning (Black, Harrison, Lee, Marshall, & William, 2003)	Evaluation	<ul style="list-style-type: none"> <li>• I am able to effectively evaluate my students' progress using the VELT model.</li> <li>• The VELT model allows for more accurate evaluation of my students' understanding.</li> <li>• I find it easier to provide feedback to my students using the VELT model.</li> </ul>