



# Technological Pedagogical Content Knowledge Creative Situation-Based Learning (TPACK-CSBL) for Teaching Creative Writing in English for Grade 5 Students

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## ABSTRACT

This article aims to review, analyze and synthesize the literature related to Situation-based Learning (SBL), Creativity based Learning (CBL) and Technological Pedagogical Content Knowledge (TPACK) in order to develop a TPACK Creative Situation-based Learning (TPACK-CSBL) learning model for teaching English. From analysis, TPACK-CSBL consisted of seven teaching steps: 1) Stimulating creativity through interesting situation; 2) Identifying the problem in situation; 3) Investigating, solving problem and creating products; 4) Presenting creative products; 5) Applying knowledge; 6) Explaining and summarizing; and 7) Evaluating learning. At final, the authors raised one example of a lesson plan that applied the TPACK-CSBL learning model to teach English for Grade 5 students. This is a concrete example of how to implement the TPACK-CSBL learning model into real classroom practice.

**Keywords:** *TPACK, situation-based learning, creativity-based learning, creative writing, English*

## 1. INTRODUCTION

The world has rapidly changed during the 21<sup>st</sup> century including changes in economy, society, politics, environment, technology, as well as communication. Technology increasingly impacts on people's lives in many ways such as transferring of knowledge and, particular, education. Information such as images, text, audio or video is relatively connected from people to people by technology. People communicate with each other by using thousands of languages; one includes English language, which is regarded as a global language. Therefore, English language is so important for communication in the current world. Regarding this, in Thailand context, there is an expectation that Thai citizens should be competent and able to use English correctly and appropriately [1]. The National Education Act (B.E. 1999) revised editions in 2002 and 2010 requires continuous development of the education system in the country. The aim of this Act is to develop lifelong learning in students. Up to this, English subject is regarded as one core subject for students to learn to

seek for more knowledge for themselves throughout their life time. Thus, the Ministry of Education of Thailand has realized the importance of teaching English at various levels. English is expected to learn in all educational levels in order to promote students to communicate appropriately with various countries around the world through listening, speaking, reading, and writing skills, as well as through new educational reforms [2].

There are many skills needed in learning English as listening, speaking, reading, and writing skills because they involve with the process of transferring knowledge and ideas with each other. Wongsathorn, [3] states that writing is a skill that can be used as a tool in communication for conveying thoughts, opinions, problems, and human needs. Writing can be used to record the history, culture, environment. In teaching English, teachers should act as a learning facilitator who inspire students, stimulate their curiosity and eager to learn, promote problem-solving practice, teamwork practice, and creative thinking presentation. At the end of learning process,

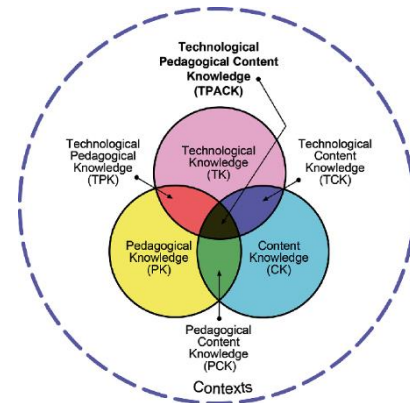
teachers assess students' learning achievement through a variety of constructive assessment methods [5]. Hence, effective writing is important for both in the past, present, and future. Hence, writing is immortality. Writing skill is a complex process that involves different skills of planning, drafting, and editing. The writer needs to know and understand vocabulary, structure, and grammar to convey the meaning clearly. Certainly, Thai students who are writing English as a foreign language will give on to the problem of writing skills, especially creative writing and artistic writing used word to convey ideas with factual information. However, Thai students have much difficulty successfully writing in English as creative writing. Nich [4] mentions that most teachers in Thailand, lack the knowledge and skill to develop creative writing. As a result, they emphasize focusing on intelligence or academic development rather than creative writing.

Nowadays, situations in our world are changing so fast and increasingly complicated than ever that cause a variety of problems. Situation-Based Learning (SBL) is proposed as one teaching approach focusing on students thinking skills to solve problems in such situations. SBL is also a guideline for organizing learning activities to develop students' creativity and problem solving skills. Students can practice self-regulated learning while learning how to solve problems in situations on their own.

In this technological world, teachers in all subjects are mandated to attain Technological Knowledge (TK) that enable them to apply technological tools and medias appropriately in delivering the targeted content to students through the chosen teaching strategy and activities. Teachers should have an ability to choose, adapt, manage or create technological tools and medias for teaching to help promote deep understanding for the students. In this sense, technology can be regarded as a powerful tool for transforming learning. Consequently, the integration of technology in teaching and learning is important to convey content through appropriate teaching methods. In 1986, Shulman developed the conceptualization of Pedagogical Content Knowledge or PCK to represent an essential knowledge for being a professional teacher [6]. To develop PCK, teachers must be able to integrate their Content Knowledge (CK) with Pedagogical Knowledge (PK). The conception of PCK had evolved to Technological Pedagogical and Content Knowledge (TPACK) by adding a new knowledge component, that is, TK. TK had added to PCK because in this technological world, teachers demands more on TK and should be able to apply TK suitably with their CK and PK [7, 8]. TPACK is now mandated for both pre-service and in-service teachers. TPACK is appeared as one among other core knowledge for teachers [9].

## 2. TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE (TPACK)

As mentioned earlier, TPACK had been originated from PCK [6,7,8] to emphasize more role of technology in teaching and learning of all subjects to encourage students more effective learning.



**Figure 1:** TPACK framework

**Source:** Koehler and Mishra [8]

Figure 1 presents the interaction among CK, PK and TK and the integration of those three knowledge components into TPACK at the heart of three circles. When each knowledge component stands alone, it is not sufficient for effective teaching and learning management. Therefore, teachers should be able to integrate more than one component for better improve their teaching efficiency. There are many patterns of integration among CK, PK and TK.

### 1) Pedagogical Content Knowledge (PCK)

Knowledge in this part focuses on the relationship between a specific subject of subject matter knowledge and pedagogical knowledge. PCK is the integration of various dimensions of knowledge to increase the potential of teaching in that content by focusing on knowledge that allows teachers to understand the original idea that students had before about that content. When teachers know student's prior knowledge and the learning difficulties that student face, that will encourage teachers to understand and select the appropriate teaching methods, tools, and assessments for teaching their students.

### 2) Technological Content Knowledge (TCK)

Knowledge in this part focuses on the relationship between TK and CK. Teachers need to know well in subject matter as well as in technology in

education such as the Stellarium is a free and open-source planetarium, licensed under the terms of the GNU General Public License that presents about three-dimensional map of the stars, typically centered on Earth, PhET or website that provide instructional simulation programs are built in computer simulations that can help students understanding scientific concepts and real-life phenomena. Students gain a meaningful understanding of various phenomena occurring in the world.

### 3) Technological Pedagogical Knowledge (TPK)

Knowledge in this part focuses on the relationship between technological Knowledge and pedagogical knowledge. These refer to the knowledge about various technologies and understanding of the function of technological tools at certain tasks until being able to select and apply technological tools appropriately with specific learning activities and targeted content. Pedagogical knowledge is ability to apply the tool to the teaching method including knowledge of classroom participation and assessment for example, discussion through the Internet, using YouTube, PowerPoint, and Mentimeter as an introduction to the lesson to stimulate and arouse student's interest.

### 4) Technological Pedagogical Content Knowledge (TPACK)

Knowledge in this part is truly the integration of technology. The TPACK framework builds on Shulman's construct of PCK to include technology knowledge as situated within content and pedagogical knowledge. This framework to understanding of teachers to integrate appropriate and diverse

technologies into the processes and methods of learning management in the content that they teach. Teachers using this framework will be able to integrate technology in teaching according to the subject content effectively. Therefore, it is necessary to be sensitive to perceive the relationship between the three knowledge components. The teacher need to understand the subject deeply, adjust to changes in the subject, and seek new teaching strategies to set the environment, provide facilities, and encourage a good attitude toward student learning. Therefore, it is necessary to organize learning activities that encourage students to develop skills in the 21st century, namely Creativity-based Learning (CBL).

## 3. CREATIVITY-BASED LEARNING

Creativity-Based Learning (CBL) is built from problem-based learning (PBL). It is one of the teaching approaches in active learning. Active learning is a teaching method that engages students in their learning by thinking, discussing, and investigating themselves. PBL is a teaching method suitable for nowadays when information is easy to access the real problem. CBL is a teaching method that offer the student to use their creativity to solve real-world problems [10]. Then they help each other find answers with their own solutions. Students will gain knowledge by searching in the classroom or searching before entering a classroom teacher will provide the source of knowledge for students. The authors reviewed and analyzed the literature on CBL ) [10] [11] [12] [13] [14] [15] [16] [17] and the result was shown as TABLE 1. From TABLE 1, the teaching steps of CBL consisted of five steps: Inspire for creativity, Set the problem, explore with creativity, creatively present findings, and assess.

**TABLE 1** Synthesis of common teaching steps of CBL.

Resources								Common teaching steps of CBL
[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	
Inspiration	Inspiration for creative	Inspiration	Inspiration	Inspiration	Inspiration	Inspiration	Inspiration	<b>Inspire for creativity</b>
Set the problem and group students based on interests	Set the problem	Set the problem and group students based on interests	Set the problem and group students based on interests	Set the problem and group students based on interests	Set the problem	Set the problem and group students based on interests	Set the problem and group students based on interests	<b>Set the problem</b>
Team project to brainstorm	Team project	Research and creativity	Research and creativity	Research and creativity	Research and creativity	Research and creativity	Research and creativity	<b>Explore with creativity</b>

Resources								Common teaching steps of CBL
[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	
Present findings	Present findings	Present findings	Present findings	Present findings	Present findings	Present findings	Present findings	<b>Creatively present findings</b>
Assess	Assess	Assess	Assess	Assess	Assess	Assess	Assess	<b>Assess</b>

#### 4. SITUATION-BASED LEARNING

Situation-Based Learning (SBL) is teaching method that focuses on teaching and learning management for students to learn and practice by creating situations that are close to the reality and can encounter in their daily lives. This will help students to connect knowledge to solve problems from situations. Also helps student to be enthusiastic about thinking of answers according to principles and fundamental ideas from related theories such as constructivism, authentic assessment, and cooperative learning which is consistent with the concept. Lankard [18] mentions that SBL involves learning from real situation rather than learning from textbooks or the content that the teacher

**TABLE 2** Synthesis of common teaching steps of SBL

[20]	[21]	[22]	[23]	[24]	[25]	Common teaching steps of SBL
Create situation	Create situation	Create situation	Recognize problem	Understand problem	study situation	<b>Present situation</b>
Questioning	Pose problem		Understanding	Problem analysis	study problem	<b>Identify the problem</b>
Solve problem	Solve problem			Problem solving	Problem solving	<b>Finding the solution</b>
				Demonstrate knowledge	Enhance and share knowledge	<b>Presenting the solution</b>
Apply concept	Apply	Teaching process	Implement	Apply experience		<b>Apply</b>
		Discuss and conclude			Discuss and conclude	<b>Discuss and conclude</b>
			Assess	Assess	Assess	<b>Assess</b>

has set. Knowledge and experience were gained from performing tasks in their daily lives. According to Khaon [19], SBL is a simulation of the environment that mimics the real conditions in society to be as realistic as possible. Then, students learn from the situation to solve various problems, all students participated in thinking of solutions for themselves and can be used to face real problems in daily life. The author reviewed and analyzed the literature on SBL [20] [21] [22] [23] [24] [25]. The result of synthesis of common teaching steps of SBL was as TABLE 2. These are common teaching steps of SBL: Present situation, Identify the problem, Finding the solution, Presenting the solution, Apply, Discuss and conclude, and Assess.

Then, the authors synthesized the common teaching steps of CBL and SBL into the new teaching model

called Creative Situation-Based Learning (CSBL). The teaching steps of CSBL model were as TABLE 3.

**TABLE 3** Synthesis of CSBL model.

SBL	CBL	Creative Situation-Based Learning (CSBL)
Present situation	Inspire for creativity	<b>Stimulate creativity through interesting situation</b>
Identify the problem	Set the problem	<b>Identify the problem in situation</b>
Finding the solution	Explore with creativity	<b>Investigate, solve problems and create products</b>

SBL	CBL	Creative Situation-Based Learning (CSBL)
Presenting the solution		<b>Present creative products</b>
Apply		<b>Apply knowledge</b>
Discuss and conclude	Creatively present findings	<b>Explain and summarize</b>
Assess	Assess	<b>Evaluate learning</b>

The teaching steps of CSBL model were: Stimulate creativity through interesting situation, Identify the problem in situation, Investigate, solve problems and create products, Present creative products, apply knowledge, Explain and summarize, Evaluate learning. In addition, the description of each step of CSBL model can be illustrated as follow.

**Stage 1 Stimulating creativity through interesting situation**

The teacher explores students' prior knowledge and experiences regarding the new content. Then use appropriate media and technology to present situations that relate to the new content to stimulate students' curiosity and inspiration for creativity.

**Stage 2 Identify the problem in situation**

Students identify problems from situations presented individually. Then divide student into groups and present the problem to the group and select the most suitable problem to solve the situation. Students work together to study and analyze the problem in order to gain a deeper understanding of the problem such as the nature of the problem, the source of the problem, factors related to the problem, and the effect of the problem.

**Stage 3 Investigating, solving problems and creating products**

Students plan to find answers of problems. By using various and appropriate sources of information until find answers to solve problems. After that, students create works by incorporating their own creativity as to make them unique, modern, outstanding and interesting.

**Stage 4 Presenting creative products**

Student in each group presented their works using appropriate formats/methods/media. Teachers provide opportunities for question, criticism, and suggestions about each work. In parallel, the teacher is responsible for guiding based on the framework of the content and extend to new knowledge.

**Stage 5 Applying knowledge**

Students apply the knowledge in different situations to achieve deep learning, which transfer to learning retention.

**Stage 6 Explaining and summarizing**

Students reflect and discuss the knowledge and experiences which gained from the lesson including summary of the concept that they learned. The teachers monitor students' conclusions to ensure that student create explicit knowledge that is key concepts completely and accurately.

**Stage 7 Evaluating learning**

The teacher assesses students' learning processes and creative performance by using both way quantitative (e.g. testing) and qualitative (e.g., worksheet) through a variety of measuring tools and suitable for learning objectives. Moreover, teachers give students the opportunity to participate in the assessment as well as self-assessment and peer assessment.

The authors integrated TPACK into the new teaching model (CSBL) in order to create the TPACK-CSBL model for developing creative writing in English for Grade t students. In addition, one lesson plan was presented here as an example of translation of the TPACK-CSBL model into real classroom practice.

**CONTENT**

Learning vocabulary about healthy and unhealthy in daily life. Relying on the study of information on a variety of source to prevent and solve problems arising from health problems. By practicing creatively writing about health care that are appropriate for everyday situations.

**LEARNING OBJECTIVES**

Knowledge: Students can identify healthy and unhealthy behavior.

Process: Students can search and choose an appropriate way to read; Students can make choices and decisions of information from the reading; Students are able to design methods of health care; Students are able to create writings about maintaining their own health properly; Students can develop teamwork skills.

Attribute: Students be able to develop self-discipline and willing to learn.

**LANGUAGE CONTENT**

Structure: Adverb of frequency:



- I eat vegetables every day.
- I do exercise three times a week.
- I usually sleep 8 hours a night.

Vocabulary: drink a lot of water, surf too much the internet, eat junk food, do exercise, sleep eight hours at night, drink alcohol, play computer games, eat fruits and vegetables, smoke cigarettes, brush your teeth

## TPACK-CSBL FOR TEACHING CREATIVE WRITING IN ENGLISH FOR GRADE 5 STUDENTS

### Stage 1 Stimulating creativity through interesting situation

A teacher investigates the students' prior knowledge by using the Pre-Test of Being Healthy topic. The teacher inspires students to, learn and think creatively through YOUTUBE with the title Healthy and Unhealthy Habits (2.32 minutes). The teacher opens via [https://www.youtube.com/watch?v=1G2f64Yw\\_-8\\_](https://www.youtube.com/watch?v=1G2f64Yw_-8_) or scan QR Code. Once students have finished watching a video on YouTube with the title Healthy and Unhealthy Habits. The teacher requires students to describe and discuss the story as what they are about to see, hear and learn. Next, the teacher presents 10 pictures of medical vocabulary on a PowerPoint program. After that, students pronounced each word 2 times and told the meaning. Next, the Teacher presents Tom's Health situation via PowerPoint program. The teacher selects students to read the summarizing as explicit knowledge on the topic of Being Healthy. The teacher checks the correctness of the summary in explicit knowledge. Then the teachers and students summarized the linguistic knowledge using the Adverb of frequency principle together.

### Stage 2 Identifying the problem in situation

Students read the situation on Tom's Health via PowerPoint program. Then, the teacher assign students to raise one problem situation along with the situation the students read. In case any student has questions or makes a problem that is inconsistent with what the teacher has set, the teacher will help and advises students to construct problems.

### Stage 3 Investigating, solving problem and creating products

Students gather to identify the problem and set solutions on the topic of Tom's health problems as designing a treatment plan. After that, the teacher assigns an Adverb of frequency worksheet to the student. Then, students' study and discuss in their group. Then, the teacher explains the use of the Adverb of frequency by integrating it with the Being Healthy topic. Students can use the adverb of frequency to plan solutions and write health treatment



instructions.

Figure2 Student Posters

### Stage 4 Presenting creative products

The teacher assigns the students to do a Gallery Walk activity. The teacher assigns each group of students to place their creative work at various points in the classroom setting by the teacher. Then, each group of students will present the poster information. After that, all students walk to see and learn all posters at the Gallery Walk.

### Stage 5 Applying knowledge

The worksheet was given to students to self-assessment themselves on the topic of health care. Then, students take scores from the assessment and design a way to take care of their own health.

### Stage 6 Explaining and summarizing

The teacher assigns the student to summarize knowledge in an explicit knowledge way on the topic of Being Healthy. The teacher gives my Reflection on Learning worksheet to students. The teacher randomly

### Stage 7 Evaluating learning

The teacher gives a survey to assess their understanding after learning about the topic of Being Healthy. Then, students take a post-test on the topic of Being Healthy.

## 5. DISCUSSION

This study presents the way to create the new teaching model called TPACK-CSBL model that combine three key things together i.e. TPACK, CBL, and SBL. The teaching steps of CSBL model were: Stimulate creativity through interesting situation, Identify the problem in situation, Investigate, solve problems and create products, Present creative products, Apply knowledge, Explain and summarize, and Evaluate learning. These teaching steps will benefit both The teacher and students because this model focuses on the student connecting their knowledge with the learning process. Students also develop better knowledge and creative writing skill. Moreover, students also develop teamwork skills that are important in the 21<sup>st</sup> century. The other teachers may take benefit from applying the TPACK-CSBL model in their teaching or even adjust this model to more fit with their specific classroom contexts.

## ACKNOWLEDGMENTS

This research was supported by Nonghuachangdonpanchad School. I would like to express my sincere thanks to my research advisors, Assoc. Prof. Dr. Khajornsak Buaraphan and Dr. Jirutthitikan Pimvichai for their valuable comments, suggestions and encouragement throughout the process of this research.

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