Abstract

This study is aimed to develop SQ5R Flipped Classroom Model for Teaching of English Reading on King Bhumibol’s Sufficiency Economy for Grade 10 Students in Benjamarachutit School Pattani. The model could lead student more active and master in reading comprehension. In addition, this model combines SQ5R reading strategy and Flipped classroom model. The research process is divided into 2 phases: 1) Instructional System Design (ISD) process, and 2) Flipped Classroom process. The research sample was 30 students in that school. The research instrument was the reading package on website and hardcopy.

The research results showed that students were active in learning activities, student have additional time while studying with SQ5R Flipped Classroom Model. Student spent 1-2 hours studying on website. After going back to the class, students got assignments. The result on the evaluation was satisfied, average score was 3.14 meaning is “good”. This means that the activities in the class and main activities on the website have good effects for student scores. The mean result of experts’ evaluation is 3.10 the meaning is good. It showed that experts agreed with additional correction/modification. the sufficiency economy has impacted too to the student thinking. The responses on the reflection form showed the positive impacts on student life to implement the philosophy on their daily activities.

Keywords: flipped classroom, SQ5R reading strategy, reading, active learning, King Bhumibol, sufficiency economy philosophy.

Introduction

Reading is a process where information from the text and the knowledge owned by the reader act together to make meaning (Block, 1993). Textbooks, naturally, are the most important components of any educational system. Research in many places and in different terms has shown that textbooks have important effects on teaching and learning activities. Textbooks exist at all levels and in most fields of study in all of the world’s educational systems (Altbach, 1991, p. 237).

Reading has been explained as the central base for both learning and achievement. Struggles with reading commonly begin in the primary grades (K-3) and become deeper by the time they are in high school. Poor reading ability can significantly impact an individual throughout their lives.

The Ministry of Education in Thailand has been aware that English is necessary for all Thai people and makes it mandatory in all educational level. Thailand as a non-English environment puts some students on the school feeling hard to take it and some teachers also feel hard to teach their students to get the comprehensive and competency in both daily communication and education in all skills-listening, speaking, reading, and writing.

In the school where this study is conducted, the teacher found that her students have lower achievement and attitude during reading lesson, there was a gap between student’s achievement and standard score required by school and there was little chance for personal concern to student needs and differentiating instruction. On the other hand, there was a need to find other solution to maximize the learning achieve-
In current teaching and learning environments, there are many kinds of teaching strategies that have the benefit of technology integration. The flipped classroom model is one of the most commonly popular. In flipped classroom model, students have the opportunity to learn the content and instruction by online from a remote location (Staker & Horn, 2012), and in the classroom, students do their homework or assignment rather than listening to lecture, there are more activities, student-teacher interaction, and opportunities for student collaboration in the face-to-face class meetings. The content can be presented via reading materials, videos, online presentations, or any combination of different delivery methods.

**Propose of the study**

1. To develop the Flipped Classroom model with SQ5R reading strategy of English reading on King Bhumibol Sufficiency Economy.

2. To evaluate the effectiveness of SQ5R Flipped Classroom Model to promote students score and student reflection on King Bhumibol Sufficiency Economy.

**Literature review**

1. **SQ5R Strategy**

   SQ5R is one of reading technique that require to learn material in depth, Pauk (1984), said that the seven steps of the SQ5R-Survey, Question, Read, Record, Recite, Review, Reflect-engage students in active comprehension. The first factor, namely Survey, refers to gathering the information necessary to define goals and concentrate on the text. At this stage, the reader is advised to read the title and think of the topic it may suggest. The second factor, Question, helps the reader focus on the reading passage and get involved in the work with the text. It is the reader’s task to form as many questions concerning the text as possible as such a procedure makes the reader engaged in the reading task. The third factor, Read, implies filling the
earlier-built mental framework with detailed information. If possible, some additional questions regarding the text should be made up. Then, the next is Record, go back and underline key concepts and take notes. This can be done on a separate sheet of paper, on note cards, in the margins of the textbook, or any way. Next, the reader should Recite, so after reading each section he ought to stop and try to answer his questions from memory. If he cannot do it, he should look back in the text again. Review factor is very similar to Recite one, but the former is applied after the whole text has been read, and the latter is employed after each small section of the text. The last factor, Reflect, time to think critically about the issues raised, the points presented, and the conclusions drawn.

Sangcharoon (2010), his research on Satri Patthalung School Thailand, found that the implementation of SQ5R improved student’ reading comprehension and writing ability significantly. Pauk (1984) also said that whole SQ5R factors has crucial roles in reading texts in content areas and drive all teachers have concern about the classroom instruction that can improve student’ literacy and achievement of education goal. Hikmawati, Rustaman, and Saefudin (2014) on their research in reproduction system of science subject found that learning effectiveness through SQ5R increased, retention of student was excellent, made students enjoyed their learning, and help them to understand the concept.

2. Flipped Classroom

Two of the most famous figures when talking about flipped classroom are Jonathan Bergmann and Aaron Sams. In 2007, both Bergmann and Sams were faced with a dilemma of how to deal with the needs of secondary students in their science classes who were continuously absent from school, so they decided to create videos of their class lectures to deliver the instructional material to absent students. To their surprise, students who were not absent from class watched the videos, too, aiming to reinforce and review key concepts. The Inverted Classroom, another term for flipped instruction, can be traced back to centuries when students in business and law schools were given assignments to complete outside class in preparation of an in-class discussion. The flipped classroom is, however, the term more commonly used currently in the K-12 communities (Talbert, 2012; Farah, 2014) and initially when used in the field of STEM Learning.

Bergman and Sams (2012) described the flipped classroom as:

- A means to increase interaction and personalized contact time between students and teachers.
- An environment where students take responsibility for their own learning.
- A classroom where the teacher is not the “sage on the stage”, but the “guide on the side”.
- A blending of direct instruction with constructivist learning.
- A classroom where students who are absent due to illness or extra-curricular activities such as athletics or field-trips don’t get left behind.
- A class where content is permanently archived for review or remediation.
- A class where all students are engaged in their learning.
- A place where all students can get a personalized education.

It is not:

- A synonym for online videos. When most people hear about the flipped class all they think about are the videos. It is the interaction and the meaningful learning activities that occur during the face-to-face time that is most important.
- About replacing teachers with videos
- An online course
- Students working without structure.
- Students spending the entire class staring at a computer screen.
- Students working in isolation.
The Flipped Learning Network reported from a survey of 453 teachers that there was a 67% increase on test scores and an 80% improvement in student attitudes (Flipped Learning Network, 2012). Alvarez (2011), reporting about the flipped classroom study in Clintondale High School, stated that failure rates decreased from 52 to 19 percent in English language arts, from 44 to 13 percent in math, from 41 to 19 percent in science, and from 33 to less than 10 percent in social studies. There was also a decrease in discipline from 735 to 249 reports. At the Byron School District, Fulton (2012) stated that there was a math proficiency increase by 9.8% in calculus and 6.1% in pre-calculus. Byron High School also experienced an increase in MCA math mastery levels from 29.9% in 2006 to 73.8% in 2011.

Following are majorities of technological tools or online platforms in Flipped Classroom research recently.

Table 1 Majorities of technological tools or online platform in Flipped Classroom research recently

<table>
<thead>
<tr>
<th>Source: (author, year)</th>
<th>Technology tools or Online Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davies, Dean, and Ball (2013)</td>
<td>MyITLab videos and software simulation</td>
</tr>
<tr>
<td>McLaughlin et al. (2013)</td>
<td>Integrated Learning Accelerator Modules (ILAM).</td>
</tr>
<tr>
<td>Roach (2014)</td>
<td>Blog, online software, video sources from exist online: Khan Academy, etc.</td>
</tr>
<tr>
<td>Kong (2014)</td>
<td>Google Docs</td>
</tr>
<tr>
<td>Missildine, Fountain, Summers, and Gosselin,</td>
<td>Interactive television.</td>
</tr>
<tr>
<td>(2013)</td>
<td>Course Website</td>
</tr>
<tr>
<td>Enfield (2013)</td>
<td>Course Website</td>
</tr>
<tr>
<td>Galway, Corbett, Takaro, Tairyana, and Frank</td>
<td>Course Website</td>
</tr>
<tr>
<td>(2014)</td>
<td>WebQuest</td>
</tr>
</tbody>
</table>

3. Bloom’s Revised Taxonomy on SQ5R Flipped Classroom Model

Bloom’s revised Taxonomy of cognitive domain provides six level of learning. The explanation is arranged from the lowest level to the highest level:

1) Remembering: in this stage, the students try to recognize and recall the information they receive; they also try to understand the basic concepts and principles of the content they have learned.

2) Understanding: the students try to demonstrate their understanding, interpret the information and summarize what they have learned.

3) Applying: the students practice what they have learned or apply knowledge to the actual situation.

4) Analyzing: the students use their critical thinking in solving the problem, debate with friends, compare the answer with peers, and produce a sum-
mary. The students obtain new knowledge and ideas after implementing critical thinking or a debate in group activities. In this level of learning, the students also produce creative thinking.

5) Evaluating: assessment or established peer-review knowledge, judge in relational terms; in this stage, students are evaluating the whole learning concepts and they could evaluate or make judgment on how far they successfully learned.

6) Creating: the students are able to design, construct and produce something new from what they have learned (Bloom, 1969).

In implementing flipped classroom, remembering and understanding as the lowest levels of cognitive domain are practiced outside the class hour (Krathwohl & Anderson, 2010). While in the classroom, the learners focused on higher forms of cognitive work, including applying, analyzing, evaluating, and creating. The following Figure below illustrates the level of students’ learning in the flipped learning according to Bloom’s revised taxonomy.

Lankford (2013) mentioned that the flipped classroom focuses on how to support the learners in achieving a higher level of the taxonomy domain. Additionally, Nederveld and Beğe (2015) added that in flipped learning, classroom activity is spent on application and higher-level of learning rather than listening to lectures and other lower-level thinking tasks. Implementing flipped learning allows the students to spend more time supporting higher-level learning tasks such as a group discussion, while lower-level tasks such as knowledge and comprehension are completed independently outside the class.

Methodology

The aim of this research study is to develop SQ5R flipped classroom model for teaching English reading on King Bhumibol’s sufficiency economy. The sample was comprised of 30 students who took English course in the 1st semester 2017/2018 academic year in Benjamarchutit School Pattani. Student gender demographics consisted of 11 males and 19 female students. All participants were grade 10 students. The course consisted of King Bhumibol’s Sufficiency Economy text and students were provided with flipped classroom model.

The component of the SQ5R Flipped Classroom Model is:

1) ISD Process Design
2) Flipped Classroom Process

The reason why this model using oval form is that this form is flexible interdependence and it cover the general process of design. The triangle form inner the model is to represent the Bloom Taxonomy process on each activity during flipped classroom, as shown in figure 2. And SQ5R strategy stands on whole flipped classroom process.
1) ISD Process Design

Adapted from ADDIE model, researcher would like to prepare and develop the appropriate and effective tool in student learning personally.

Step 1: Analysis phase:

Students are on grade 10 with major in science, English is a minor course, so they need more time to study in English. Flipped classroom would be alternative for them to get more time to study and SQ5R strategy would give comprehension deeply and make sense the lesson for student to apply on daily life.

To deliver SQ5R Flipped Classroom Model, MOODLE would use to support students to study outside classroom, video and text provided to watch online or offline. Forum discussion and question with command of SQ5R Process also prepared to help students achieve the 2 basic levels of Bloom Taxonomy, Remembering and Understanding.

Hardcopy of texts and active learning activities, presentation, retelling, note taking, and poster, prepared with command of SQ5R Process while studying in the classroom to help student achieving the higher level of Bloom Taxonomy, Applying, Analyzing, Evaluating, and Creating.

Step 2: Design phase:

In the next phase, there are 2 activities that students had to do, studying online (at home) and traditional (in the classroom), (Figure 3).

This phase obtained reading package on both home study (on website “MOODLE”), and classroom (text paper).

Step 3: Development phase:

In this phase, the MOODLE template was modified as simple as and as effective as the need, and the content was provided by instruction video directly in the MOODLE and text of King Bhumibol’s Sufficiency Economy also prepared as match as with the rules of effective text (Figure 4 and 6). In the classroom also prepared active learning activities, Evaluation, and Student’s Reflection (Figure 5, Table 3 and 5).

Step 4: Implementation phase:

After the tool was ready, the next step was to invite the experts to check the correctness and completeness of the tools by rubric, there was 4 levels on it; improved, fair, good, and excellent (Table 4). After correcting and assessing according to the expert’s suggestion, the tool would be tested to the students.
Step 5: Evaluation phase:
The last step was the end process of implementation, after student finished the test, their score would appear (Table 3) and continue to write the reflection form about the content of King Bhumibol Sufficiency Economy (Table 5).

2) Flipped Classroom Process Design
In the whole process, teacher always engages in activity both online and offline (traditional class) as a facilitator and supervisor. With employing the technology in both conditions, it will make the learning activities more meaningful and achieve the good result.

In the online activity at home, students will engage in basic level of bloom taxonomy, remembering and understanding. The teacher prepares questions on website. The teaching procedure can be illustrated as shown in Figure 4.

Then while in the classroom, the next level will be conducted in higher level of Bloom Taxonomy (applying, analyzing, evaluating, and creating) using the active learning activities and evaluation, the result is in table 3. Such as: presentation, retelling, note taking, poster. The teaching procedure can be illustrated as shown in Figure 5.

After finishing all processes, the teacher gave the reflection form of King Bhumibol Sufficiency Economy texts to the students.
Table 2 Question of student reflection of the text

<table>
<thead>
<tr>
<th>Reflection on King Bhumibol Sufficiency Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do I feel about this philosophy?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>2. In the daily activity, what will I do after understanding this philosophy?</td>
</tr>
</tbody>
</table>

The first question made students to focus on their emotional response about the King Bhumibol Sufficiency Economy Philosophy. The second question focused on encouragement for the students to think of real action on their daily activities after understanding the philosophy.

**Results**

A. Result of Purpose 1: To develop the Flipped Classroom model with SQ5R reading strategy of English reading on King Bhumibol Sufficiency Economy.

The result of this research is divided into 2 parts:

1) Study at home

While home studying, the reading process depended on student needs. Even we mentioned in the website about the role, but that was not the obligation. Students could choose text only or video only or both. But they had to participate in the forum part and answer the question in the question part. This role was delivered by teacher in the classroom before.

Figure 6 Student activities on website.
As a result in figure 7 and 8, all of students were active in the website activities. This figure recorded time period in 1 week, and showed only the time without day. All of students had been recorded in this figure. In the same time between 11.00 am to 13.00 pm, all 30 students tried to login and few students tried to re-login. This is the time they had login together. Then in the other time, just few students tried to re-login. Such as, only 4 students access at 17.00 pm, 3 students at 18.00 pm, 5 students at 19.00 pm, and so on. This figure showed that they accessed the website between 1-2 hours average, their activities are awesome (see figure 9). It proved that they have done many tasks for many times. However, they got additional time to study around 1-2 hours. It was better that only study in traditional classroom.

2. Study in the classroom

After coming back from home studying, students did the traditional classroom. The teacher touch using active learning activities, presentation, note taking, retelling, and poster. Text that they have read in the website was used in the class. With prior knowledge from website activities, student had active assignment in the class. Reading process was employed in this class: prereading, reading, and postreading. Result of evaluation is on Table 3.

B. Result of Purpose 2: To evaluate the effectiveness of SQ5R Flipped Classroom Model to promote students score and student reflection on King Bhumibol Sufficiency Economy.

The result during classroom activities in the evaluation was satisfied as showed in the table 3 as rubric form.
Table 3 Result of student during formative evaluation

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>$\bar{x}$</th>
<th>n</th>
<th>S.D.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presentation evaluation form</td>
<td>3.41</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Content</td>
<td>3.57</td>
<td>30</td>
<td>.63</td>
<td>Very good</td>
</tr>
<tr>
<td></td>
<td>- Use of language</td>
<td>3.43</td>
<td>30</td>
<td>.57</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Type of question</td>
<td>3.23</td>
<td>30</td>
<td>.43</td>
<td>good</td>
</tr>
<tr>
<td>2</td>
<td>Note taking evaluation form</td>
<td>3.15</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Main idea</td>
<td>3.07</td>
<td>30</td>
<td>.70</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Vocabulary</td>
<td>3.10</td>
<td>30</td>
<td>.55</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Information text</td>
<td>3.30</td>
<td>30</td>
<td>.65</td>
<td>good</td>
</tr>
<tr>
<td>3</td>
<td>Retelling evaluation form</td>
<td>3.01</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Content</td>
<td>3.10</td>
<td>30</td>
<td>.61</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Organization</td>
<td>2.93</td>
<td>30</td>
<td>.52</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Use of language</td>
<td>3.00</td>
<td>30</td>
<td>.45</td>
<td>good</td>
</tr>
<tr>
<td>4</td>
<td>Poster creation evaluation form</td>
<td>3.00</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Content</td>
<td>3.00</td>
<td>30</td>
<td>.53</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Organization</td>
<td>3.03</td>
<td>30</td>
<td>.41</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>- Appearance</td>
<td>2.97</td>
<td>30</td>
<td>.49</td>
<td>good</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most of student scores were 3.14, meaning was “good” while evaluation. This means that the activities in the class and main activities on the website have good effects for student scores.

For the 4 experts’ evaluation, the mean result is 3.10 the meaning is good. It showed that experts agreed with additional correction/modification. The mean score is in table below.

Table 4 Result of experts evaluation evaluation

<table>
<thead>
<tr>
<th>Menu</th>
<th>$\bar{x}$</th>
<th>n</th>
<th>S.D.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Content</td>
<td>3.2</td>
<td>4</td>
<td>.50</td>
<td>Good</td>
</tr>
<tr>
<td>2. Appearance</td>
<td>3.0</td>
<td>4</td>
<td>.00</td>
<td>Good</td>
</tr>
<tr>
<td>3. Usability</td>
<td>3.5</td>
<td>4</td>
<td>.57</td>
<td>Good</td>
</tr>
<tr>
<td>4. Performance</td>
<td>3.0</td>
<td>4</td>
<td>.00</td>
<td>Good</td>
</tr>
</tbody>
</table>

3.1
On the reflection form, all 30 students have been summarized and the result is like table 5:

**Table 5 Summarize of the answer of student reflection**

<table>
<thead>
<tr>
<th>Reflection on King Bhumibol Sufficiency Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What do I feel about this philosophy?</td>
</tr>
<tr>
<td>Motivated, wondered, helpfully, curious</td>
</tr>
<tr>
<td>2. In the daily activity, what will I do after understanding this philosophy?</td>
</tr>
<tr>
<td>Start to save money, tell parent and friends, ask parent and friends to implement at home.</td>
</tr>
</tbody>
</table>

The responses to the first question showed that students felt motivated, wondered, helpfully, and curious after understanding the King Bhumibol Sufficiency Economy. Some of them have known this philosophy already and some of them have not known yet before this class. The responses to the second question showed that this philosophy has encouraged them to implement it on their daily activities, start to save money and tell to their parent and friends about this philosophy and ask them to implement it.

### Conclusion and discussion

#### A. Conclusion

The result of the study “Development of SQ5R Flipped Classroom Model for Teaching of English Reading Comprehension on King Bhumibol’s Sufficiency Economy for Grade 10 Students” is the development of SQ5R Flipped Classroom Model has been created. Based on my SQ5R flipped classroom model, it has proved the effectiveness of this model. Process of design: ISD Design Process and Flipped Classroom Process. The result shows that the student more active and enjoy in both study at home and in the classroom. Students more active in website and spend much time compared with only study in the classroom. The result when activity in the classroom was satisfied too, they more active and their score during test is so satisfied. The responses of student about King Bhumibol Sufficiency Economy were very positive and impacted to their daily life activities.

This study proved that technology can promote achievement of student to complete learning goal, not only cognitive but also affective and psychomotor of student. Combining learning environment online and offline is so powerful for student comprehension and make sense for student reflection on their daily life.

#### B. Discussion

Flipped classroom is one of the innovation models that is suitable for most of courses including Reading. Using flipped classroom, we can help student easily to prepare and master what they will learn. Especially nowadays student. As digital natives, the students will get experience that appropriate with their needs and their ability. Even though not all students are like that, but at least this model can help them to study better and easier. As Yarbro, Arfstrom, McKnight, and McKnight (2014) mentioned in Flipped Learning pillar: Flexible environment, learning culture, intentional content, professional educator. It also has changed perceptions not only students, but also teachers and administrators.

In this study, we have proved that flipped classroom is one of the effective tools for reading class that has many limitations of student condition. The biggest problem/limitation in this class is the student stay in scientific environment. They are in the science class. As we know that for science class is very different with social class, English course is one
of social class that, with no question, most of science student in Thailand (specially) and other country that English is not native or their second language do not like it. They just spent little time for English course because they have many other courses of science, many assignments, many activities, and so on. With this limitation, Flipped classroom model is one good choice to be used. Because it is combined / blended between online/electric and traditional, student can face it better. It also has been proved in Public Health student from University in Canada using the flipped classroom in novel teaching. The research showed that flipped classroom is very effective method (Moraros, Islam, Yu, Banow, & Schindelka, 2015).

Flipped classroom model is also appropriate with reading strategy and reading process. Combining and arranging the comprehension between flipped class and reading is not impossible. When a student studying at home, they use the general flipped classroom condition that is self-learning, but he/she does not study alone, it is more like PLS (Personal Learning Space), a special learning environment constructed by network technology, it has 3 key features; support for individualize learning, support for individualize instruction, support for full interaction (Qiu, Xie, Ni, & Wu, 2015). That was why we used Moodle platform to manage this lesson. Through the video and text both could be watched and read online or offline (download first). This process was to achieve the low level of bloom taxonomy.

The seven steps of the SQ5R mentioned by Pauk (1984), that were-Survey, Question, Read, Record, Recite, Review, Reflect-engage students in active comprehension. It has showed too that it is possible to be gathered with flipped classroom. This combination make student more active and confident to prepare at home effectively before going to the class. And SQ5R activities in the classroom are also very effective to be implemented here, together with Flipped Classroom Model. While study in the class, traditional active learning was employed to make sure that this class is student-centered. Using SQ5R technique has been proved that it is effective on reading comprehension by students and very satisfied level of their satisfaction (Sangcharoon, 2010). And also using the collaborative and cooperative learning is so effective to enhance critical thinking (Ghokale, 1995) in purpose to achieve the high level of bloom taxonomy. Revised Bloom Taxonomy has big role in this study remembering that it is very famous and use most of education need all around the world. Bloom’s is a well-defined and broadly accepted tool for categorizing types of thinking into six different levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. A revised version of Bloom’s (Anderson & Krathwohl 2001).

Sadler (1989) mentioned that to take effective action, students need to be able to evaluate their own learning and to develop skills in self-assessment. Using the form of reflection, it can help students to mapping what the impact of their learning from the text that they have understood to implement on their daily life activities.

References


