EFFECTS OF TEAM-BASED LEARNING IN A FLIPPED CLASSROOM WITH ENHANCEMENT OF LISTENING AND SPEAKING ABILITY OF MATTHAYOMSUKSA V STUDENTS

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Abstract- The flipped classroom is a new pedagogical method, which employs asynchronous video lectures at home and practice solving problems at school. Integrated with team-based learning in the classroom, it is more interesting to explore the findings. This paper investigated learner’s ability in achieving the goal of English listening and speaking in class. The purposes of this paper were 1) to compare listening and speaking ability between flipped classroom integrated with team-based learning method and traditional approach, 2) to compare test score of listening and speaking ability before and after treatment and 3) to compile students’ satisfaction score on flipped classroom integrated with team-based learning. The study conducted with 68 Matthayomsuka V students who study in the first semester of 2016 academic year for 10 weeks. Research tools were lesson plans, a satisfaction questionnaire with the reliability index of 0.89 and listening and speaking ability test with reliability index of 0.95, content validity index of 0.83 and face validity was tested by students. English speaking and listening ability test was employed by using inter-rater approach with reliability index of 0.90. The data was analyzed by using mean, standard deviation, percentage and paired t-test for independent sample. The findings of this paper indicated that the test scores in English listening and speaking students’ ability after learning in an integrated flipped classroom with team-based learning was significant higher than before at the .05 level and the comparing test scores of experimental group in English listening and speaking students’ ability with controlled group which was carried out traditional approach were higher than at the significant level at .05. The satisfaction scores were calculated in mean and were at a very high level.

Keywords- Flipped Classroom, Team-based Learning, English Listening and Speaking, Active learning.

1. INTRODUCTION

1.1 The emphasis of changing
In an age of changing where economy, social as well as technological advances in communications, information, news, causing new knowledge which occurs numerously and continuously. For anyone who has been associated with teaching need to modify behavior to suit the era. Teachers cannot convey the knowledge to all learners. Teaching and learning in the 21st century, it has, regardless of the situation, the world that is different from the 20th century, and the educational system must be developed to comply with the reality. P21’s Framework for 21st Century Learning was developed with input from teachers, education experts, and business leaders to define and illustrate the skills and knowledge students need to succeed in work, life and citizenship, as well as the support systems necessary for 21st century learning outcomes. It has been used by thousands of educators and hundreds of schools in the U.S. and abroad to put 21st century skills at the center of learning. (The Partnership for 21st Century Learning, 2015). To make the students comprehend some real knowledge, it must have changed in many aspects, especially, teaching. Petch Muanpan. (2016) has stated that traditional teaching method (Lecture), where a teacher standing in front of a class talking throughout the hour and day as the hero alone it contributes very little to learn. Teachers need to teach learner to seek knowledge by themselves together with applying teaching activities through project-based learning where students actually practice internship in the actual place through the activity assembly. To work in a team, to face with a real problem, these things will make the learner have worked together to find the ways to solve the problem. Working together as a team to confront the problem, think about the plan and design activities to create alternatives to solve problems while executing, which is learning that has been put into practice to make the learners to think a resolution is a good method. Moreover, Wichan Panich (2012: 16-21) has mentioned that the skill for life in the 21st century consists of Core Subjects are the native language and the world's major language.

1.2 Failure of education system
The key to develop the country is to develop education. English language is becoming the lingua franca of the world. For those who use English for communicating in real life have more beneficial than those who use English as a second language, so who use English fluently is more advantages and have
more chances in a real world. Thai students spend twelve years studying English in primary and secondary schools, but the results are questionable. When compared to people in neighboring countries, Thais’ English proficiency is relatively low. The 2010 Test of English as a Foreign Language (TOEFL) showed that Thailand ranked 116th out of 163 countries. The international average score was 80 but the Thai average score was 75, which was a little higher than the average scores of Cambodia (68), Laos (66), but was trailing far behind other ASEAN countries such as Indonesia (84), Malaysia (89), the Philippines (90), Vietnam (80), Myanmar (80) and Singapore (97). On the 2015 report, the Thai average score was a little bit higher, 76 (Test and Score Data Summary for TOEFL, 2014-2015). In addition, in the most recent Education First First English Proficiency Index (EF EPI, 2015) released in October, 2015, Sweden, Netherlands and Denmark ranked first, second and the third, Singapore twelfth, Malaysia fourteenth, Vietnam twenty ninth, Indonesia thirty second and Thailand 62nd – the world’s lowest group– with an average score of 45.35 and labeled ‘very low proficiency’. When the English-proficiency test results within Thailand were examined, the O-NET (Ordinary National Educational Test, 2015) revealed that the English average scores of Thai primary school students in 2015 was, out of 100, 24.98 respectively. These poor results were controversial. Some doubted the consistency and validity of the tests, while others questioned the teaching and learning practices in English-language classes in Thai schools.

1.3 What is a flipped classroom?
As interest in the flipped classroom has grown since its launch in 2004, it’s become popular in every part of the world. Barber and Mousahed (2007:26) have stated that the only way to improve outcomes is to improve instruction. Flipped classroom has become something of a buzzword in the last several years. Flipping the class means that students gain first exposure to new material outside of class, usually via reading or lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates. (Mazur, 2009). David (2001) has stated that in terms of Bloom’s revised taxonomy (2001), this means that students are doing the lower levels of cognitive work (gaining knowledge and comprehension) outside of class, and focusing on the higher forms of cognitive work (application, analysis, synthesis, and/or evaluation) in class, where they have the support of their peers and instructor.

1.4 Why team-based learning?
Team-based learning is an evidence based collaborative learning teaching strategy designed around units of instruction, known as “modules,” that are taught in a three-step cycle: preparation, in-class readiness assurance testing, and application-focused exercise. A class typically includes one module. Students must complete preparatory materials before a class or the start of the module. Materials may be text, visual or other, and set at a level that is appropriate to the students and the course. Team-Based Learning implementation is based on four underlying principles (Michaelsen & Richards 2005:85-88): Groups should be properly formed (e.g. Intellectual talent should be equally distributed among the groups). These teams are fixed for the whole course. Students are accountable for their pre-learning and for working in teams. Team assignments must promote both learning and team development. Students must receive frequent and immediate feedback.

1.5 How they work?
This pilot of implemented flipped classroom integrated with team-based learning in English listening and speaking class as a part of changing traditional lecture to 21st century teaching and learning. According to the differences of students’ study skills. Educator or teacher have to investigate in individual aptitude effectively. Like the word one cannot fit all, only one method cannot serve all students in a class to comprehend the lecture. Flipped classroom provides students to use learning tools and spend their time as much as they can outside the class. Team-based learning also furnish deep learning by using team strategy and collaborate with teaching others. Students can learn anywhere and anytime, it is real a child-centered approach. The new learning format divided into 3 parts; pre-class, in-class and out-class, pre-class; students watch short online video lectures, complete individual readiness assurance test (IRAT) at their convenience before class and make note about what they do not understand. In-class, students then come into class to engage in activities traditionally reserved for outside of the classroom, doing team readiness assurance test (TRAT), sitting in a team and carry out a team activities; group work, discussion, and feedback with the teacher present. Out-class, teacher provides an extended learning by presenting the additional tools.

![Fig.1 Flipped Classroom Model](image-url)
Effects of Team-Based Learning in a Flipped Classroom With Enhancement of Listening and Speaking Ability of Matthayomsuksa V Students

Source: Jeremy F. Strayer, Ohio State University

### Fig.2 Team-based Learning Model

Source: www.bradford.ac.uk/educational-development/team-based-learning/

### Fig.3 Team-based Learning in a Flipped Classroom

1.6 The objectives of the research
1. To compare listening and speaking ability between flipped classroom integrated with team-based learning method and traditional approach.
2. To compare test score of listening and speaking ability before and after treatment.
3. To compile students' satisfaction score toward flipped classroom integrated with team-based learning.

### II. RESEARCH METHOD

The research is making an attempt to study the effects of using flipped classroom integrated with team-based learning in achieving a goal of listening and speaking ability of Mattayomsuksa V students. Quasi-experimental research was used with two group; controlled and experimental group. The participants were 68 students who study in Mattayomsuksa V (Grade 11). Research tools were lesson plans, pre and post English listening and speaking ability test by interviewing and assessing by inter-rater method and satisfaction questionnaire to evaluate the students’ attitude after experiment. The data was analyzed by using mean, standard deviation, percentage and t-test for independence sample.

### Table 1 Research Framework

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
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</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>T₁*</td>
<td>X₁*</td>
<td>T₂*</td>
</tr>
<tr>
<td>Controlled</td>
<td>C₁*</td>
<td>X₂*</td>
<td>C₂*</td>
</tr>
</tbody>
</table>

*T₁* = Pretest for experimental group  
*C₁* = Pretest for controlled group  
*X₁* = Treatment; team-based learning in a flipped classroom instruction  
*T₂* = Posttest for experimental group  
*C₂* = Posttest for controlled group  
*X₂* = Traditional method

### III. FINDINGS

The flipped classroom and team-based learning implies such organization of the educational process in which, when students attend face-to-face classes they already have some theoretical knowledge and understanding of the matter that will be discussed in the classroom. It makes the interaction more effective and fruitful as students feel more comfortable and confident asking questions and discussing the issues with the teacher and peers. According to Larry K. Michaelsen (2004:85-88) has stated that team-based learning can develop the ability of synthesizing, analyzing, and ability to self-study and decision-making capabilities, including the ability to work with others. Approximate to Bergmann and Sams (2012) have cited in “Flip Your Classroom” that flipped classroom is approaching a “child-centered approach” as well as helping children with different abilities. According to their own abilities, students can listen and view the online instruction, in case they are still bewildered, they will stop anywhere and rewind (Review) again until they will be understood.

The findings of this paper indicated that the test scores in English listening and speaking students’ ability after learning in an integrated flipped classroom with team-based learning was significant higher than before at the .05 level and compare test scores in English listening and speaking students’ ability between controlled and experimental group was higher than using traditional approach at the significant level of .05.

### IV. DISCUSSION

In this paper, the researcher report the findings of effects of using flipped classroom integrated with team-based learning by comparing pretest and posttest. The posttest score has more higher than...
Dealing with classroom, team-based learning in a flipped classroom with enhancement of listening and speaking ability of Matthayomsuksa V students is revealed that the result of the research is consistent with the hypotheses that set, which may be caused by the following, teaching with integrated with two strategies has used the concept of founders and taught thoroughly and competently, according to the teaching method of flipped classroom are experiential engagement, concept exploration, meaning making, application & demonstration and the other methods focus on team management as it highlighted their discussion; group formation, accountable, assignment quality. Moreover, National Basic Education Core Curriculum B.E. 2551 (Ministry of Education. 2008) with educational essence as well as Smith & Sams (2012) defined that a new teaching like flipped classroom approaches to a child-centered method, more importantly, other skills included, an integrated learning (Blended Learning), while keeping the core concepts that are important, participants can exchange, learn and transmit the information, knowledge quickly cause of electronic systems. As a form of learning that has to use technology to improve instruction in the classroom, which correspond to the specific education policy in section 7-5 the development of educational technology by providing consistent and various knowledge together (Ministry of education. 2008) and Chinnapatra Phumirat (2013), General Secretary of National Basic Education Core Curriculum Commission said that children learn content in advance at home, then sharing knowledge in class, children can learn better and faster. For other points of view, Wattanachai Winichakul (2015) said that the students see the future trends clearly on short, that is Bring Your Own Device (BYOD) phenomenon – that is, mobile device will becoming more important as school supplies that teachers need to use both inside and outside the classroom, as well as Surasak Pahae (2014: 1) discussed that management of teaching in a flipped classroom provides creativity, knowledge, ability and intelligence of the person (Individualized Competency).

In addition, Lan Lalit (2014) study on a portable computing device to support educational system, found that students who learn in a flipped classroom after studying, the result showed that was satisfied, when using the media devices, portable computers in the flipped classroom.

<table>
<thead>
<tr>
<th>Table 2 The comparing of controlled and experimental group’s scores</th>
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<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>Pretest</td>
</tr>
<tr>
<td>Posttest</td>
</tr>
<tr>
<td><strong>Pretest</strong></td>
</tr>
<tr>
<td>Posttest</td>
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</table>

Comparing the posttest scores in team-based learning in a flipped classroom with traditional approach classroom. The result of team-based learning in a flipped classroom compared to traditional approach classroom were found that there is different or have a relationship together in significantly at .05 level. That is, teaching in, team-based learning in a flipped classroom, after treatment showed that the difference scores between pretest and posttest of experimental group increased higher than the difference score of controlled group. English listening and speaking ability test was used to assess students with full score of 15 points from scoring with the interviewer (Inter-rater Approach). The rubric assessment was applied from The University of The state of New York Regents (2003) with the scoring 0, 1, 2, out of a total of 5 topics are understanding, pronunciation, vocabulary, fluency and grammar. By experimental group, the average score, before treatment was 10.27 after treatment was averaged at 12.45 and the score showed that the difference between before and after treatment was higher at -2.18. The controlled group, before studying, the average score was 10.71 and after studying the average score was 11.77 by differential before and after studying with the average score was higher at -1.06. The result found that team-based learning in a flipped classroom’s scores compared to traditional approach classroom’s scores has increased more than the average score for the controlled group by an average score of over at 1.12, this numeric data explained that the students can learn better and make better results in team-based learning in a flipped classroom considerably.

<table>
<thead>
<tr>
<th>Table 3 Experimental Group’s Pretest and Posttest scores</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Pretest</td>
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<tr>
<td>Posttest</td>
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</table>

The average score of team-based learning in a flipped classroom with an average score of 10.2727 after the treatment and a posttest score was averaged, have difference at 12.4545 the different average score before and after treatment was 2.1818 representing 14.55 %, students who study in team-based learning.
in a flipped classroom have strong ability to use language more than before treatment.

### Table 4 Satisfaction Score

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Topics</th>
<th>Average</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Learning Activities</td>
<td>4.69</td>
<td>0.57</td>
</tr>
<tr>
<td>2.</td>
<td>Instructor</td>
<td>4.68</td>
<td>0.66</td>
</tr>
<tr>
<td>3.</td>
<td>Assessment and Evaluation</td>
<td>4.70</td>
<td>0.61</td>
</tr>
<tr>
<td>Overall</td>
<td>Satisfaction</td>
<td>4.69</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Students who study with team-based learning in a flipped classroom, there is a satisfaction score highest level. The average at 4.6887 out of 5 rated by students. The questionnaire was used after completing the research. The test is divided into three parts, namely the satisfaction of teaching activities, satisfaction of teacher and satisfaction with overall assessment and instruction. By the maximum satisfaction score is scaled are the overall satisfaction, learning activities, and the last is teacher, there is not much different, is 4.6919 and 4.6834, 4.7011 respectively.

### REFERENCES


