

# Enhancing Students' Motivation: Speaking Challenging Clips via Facebook

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**Abstract-** This study aimed a) to improve learners' speaking skill via the use of clips uploaded in Facebook, b) to enhance learners' motivation in English speaking skill via the use of clips uploaded in Facebook. 10 participants majoring in Electrical Engineering and Civil Engineering took part in this study. The research instruments were a questionnaire, an observation form, a speaking rubric, and the semi-structured interview. The descriptive and interpretative methods of content analysis was used to analyse data in this study. The findings revealed that, first, the students' English speaking skill was improved. Second, in terms of students' motivation, it was higher. In relation to clips uploaded in Facebook, the positive feedback from participants' friends who watched these clips in Facebook made them satisfied and felt positive towards English subject.

**Index Terms-** motivation, speaking skill, clip, Facebook

## I. INTRODUCTION

English is one of the compulsory subjects that Thai students have been studying English for many years and many courses in schools and universities, including the tutorial institutes. However, it seems unsuccessful. Several reports revealed that Thai students have the low proficiency in English. (Zoom, 2013; Wachirawit, 2016; BBC Thai, 2018; Weeraphong, 2018).

EFL stands for English as Foreign Language. This refers to teaching English as a foreign language for those who do not use English as a primary language. For example, China uses Chinese as the official language everywhere. So, teaching English in China is the teaching English as a Foreign Language. Similarly, in Thailand, Thai language is used as the first and official language for communication. Teaching English in Thailand is in the form of teaching English as a Foreign Language.

The problems in Thai education can be from various factors. First, the curriculum does not support learners. In Thailand, it seems that learning English in Thailand is on the basis of studying for the exam (Wachirawit, 2016; BBC Thai, 2018; Weeraphong, 2018; Britishcouncil, n.d.). The focus is on grammar, reading, vocabulary, and writing. Listening and speaking skill are less emphasised. Next, the size-class is one of the great barrier. (Jedsarid, Kettawa, and Santana, 2015). Normally, it can be seen that each class contains 40-50 students with only one teacher in the class. As a result, with only one

teacher cannot provide and support a large amount of students in a classroom thoroughly. Another factor is that when the teachers are in the class, they follow the course-books and let students practice in the class only. When the class finishes, students stop learning. It seems that students learn only in the classroom, they are not encouraged to spend extra time to study or inquire new knowledge or practice. (BBC Thai, 2018)

One of the important factors is the teachers' qualifications. Both Thai teachers and native speakers are hired to teach English. However, it appears that some of teachers lack an appropriate qualifications. They may not graduate in education or related fields of teaching. Similarly, many native speakers who are teachers in kindergarten, high schools, or universities are hired to teach listening-speaking courses. However, there may be some of them unqualified because of the lack of ideal qualifications and experiences in teaching. (Jedsarid, Kettawa, and Santana, 2015; Phanitkul, 2015; BBC Thai, 2018).

In terms of students, it appears that, first, students lack motivation in study English. They seem to be against English. They also lack awareness of that English is important for them in their career path. Besides, they need to be more patient, more active, and more self-discipline. (Weeraphong, 2018; Britishcouncil, n.d.)

## Rationale of the Study

English consists of four skills, reading, writing, listening, and speaking. One of the most problematic area is speaking. Although Thai students have been studying English many years, it seems that they cannot speak English in daily life or in a formal situation. This problem can be resulted from many factors. (Zoom, 2013; Wachirawit, 2016; BBC Thai, 2018; Weeraphong, 2018).

First, Thai students lack confidence. Thai students are not self-confident when they must speak English in any situations. Furthermore, Thai students feel shy when the classmate look at them and laugh or say something while they are speaking in front of the class or make a conversation with a teacher. (Jedsarid, Kettawa, and Santana, 2015; BBC Thai, 2018; Weeraphong, 2018; Britishcouncil, n.d.).

Second, students do not use English in real life. Most students only use English while they are in the classroom. In addition, in the classroom, the most important topics can be grammar, reading, vocabulary. These skills are quite emphasised in Thai schools and universities. While a few hours of listening and speaking for real life is taught. (Britishcouncil, n.d.)

Third, Thai students' pronunciation do not sound like native speakers. Due to the problem of speaking or pronouncing the words in English, some groups of Thais believe that you are not smart if you cannot pronounce or speak English like a native speaker. This is one of the great barrier to practice speaking. (BBC Thai, 2018)

Fourth, Thai students may not be patient enough. They also lack of self-discipline and the career goals. Today, educational technology plays a vital role in language classrooms. Lots of teachers bring the applications that arouse the learners' interest. They can practice speaking from these kinds of technology or social media. One of the most popular IT for language learning or social media could be a chat via or a clip upload in Facebook. (Britishcouncil, n.d.)

Tukko N. (2009) stated that nowadays, social media has played the great role in all walks of life. It is considered as the popular digital platform that many organisations make use of them. For example, school and universities can publicise their news about admission in the next academic year. A transportation section can inform the news about how to renew the driver's license. The fan page about cooking can share how to cook food. From this popularity, Facebook is used as the platform for various purposes. In Thailand, the education settings normally upload the clips about learning through Facebook.

From the researcher's observation, students often go through the Internet by Facebook as the first source of access. As a result, it would be interesting to investigate that whether students have a better performance in speaking skill via clips uploaded in Facebook or not. In addition, students' motivation would increase or not via clips uploaded in Facebook.

## Objectives of the Study

There are two main objectives as follows:

1. To improve learners' speaking skill via the use of clips uploaded in Facebook
2. To enhance learners' motivation in English speaking skill via the use of clips uploaded in Facebook

## Significance of the Study

The findings from this study could be beneficial for both teachers and learners as following:

1. Teachers of English language would understand the learners' characteristic or needs in teaching English speaking skill to them, both in terms of teaching strategies and how to motivate learners' interest in English speaking skill.
2. Learners who are interested in improving English speaking skill would gain motivation for furthering their English speaking skill outside the classroom.

## II. LITERATURE REVIEW

### The definition of Motivation

According to Longman Dictionary of Contemporary Online (2019), "motivation" is "eagerness and willingness to do something without needing to be told or forced to do it."

In relation to Cambridge Dictionary Online (2019), "motivation" means "enthusiasm for doing something."

"Motivation" refers to "the feeling of wanting to do something." (Oxford Learner Dictionary, 2019)

From the three trusted dictionaries, "motivation" can be defined as the act of doing something with willingness or enthusiasm."

According to Fadel and Khaled (2013), motivation has a great impact in someone's learning process. Motivation can be divided by various aspects: First, it is categorised as a) intrinsic and b) extrinsic. Intrinsic motivation can be referred to a drive which comes from a person. For example, people enjoy doing activities or whatever they are interested in such as cooking, riding a horse, and drawing and painting. Another is extrinsic motivation. This kind of drive is generated from the outside, not an individual. For example, a student gets a blessing when he/she does a good deed.

In terms of language learning, students should be motivated to pay attention and enjoy learning language. Various scholars have proposed how to motivate students in the language classroom in terms of speaking as the following:

a) A class with a communication should be set up. This can be done as a group activity. A flipped classroom is one of another good example to engage learners together.

b) English subject should be more practical. It is more interesting to let students should be encouraged to practice, not just listen to the teachers' lecture all the time. When they get involved in the activity, they are happy and enjoy learning. One of the most appropriate teaching methods is project-based learning, which can enhance learners' interest and motivation.

c) Teachers should provide a supportive-atmosphere classroom. When students are happy, they have motivation to do activity. The use of social media or IT learning in the language classroom is considered as one of interesting strategies.

d) Teachers should unite the students' relationship. A classroom agreement should be set with your students before starting the class. Let show what you think about them. Try to encourage or motivate them to join the class activity with other classmates.

e) Comments or feedbacks should be reflected. Students are needed to be commented or criticised by their teachers carefully and considerately. If teachers show their care to the

students, they will respect you and have motivation in a language learning. Not only a teacher who acts as the evaluator, but their friends in the class can be the assessors.

### **Activities to Motivate Speaking in the Classroom (Clare, n.d.; Vicky, n.d.)**

a) Levels of Difficulty should be reduced. The teachers have to maintain students' interest by providing exercises that is simple and suit the students' ability. This is because they may lack self-confidence. As a result, the activity for speaking should be simple and not complicate as the first step. After that, teachers try to motivate then to speak as much as they can.

b) Background knowledge should be related. Teachers should relate the content of speaking with the learners. This is because when they have some background knowledge, they will feel more confidence, and then speak out. The topics should be discussed by the learners easily e.g. lovely pets and animals, subjects at school, sports, and food.

c) L1 usage should be accepted in the classroom. It is inevitable that, as the first time, students will use their mother tongue with English. This may be that they cannot use the correct vocabulary or they do not know how to speak properly. Teachers have to be patient if you command the whole class to use English. Otherwise, there is no one can speak English because they be not able to speak all in English.

d) Speaking should not be interrupted. When students speak out, there are absolutely errors such as pronunciation, sentence structure, or vocabulary. So, teachers should not interrupt them while they are speaking which may cause them embarrassed, frustrated, and lose self-confidence. After they finish their speaking, just tell or explain them about the errors.

### **Speaking Strategies for Teaching**

According to Richards (2008), types of speaking can be divided into three categories.

First, talk as interaction. It refers to a conversation. When people meet each other, they have a conversation such as greeting, making a small talk, and making a new friend. These kinds of talks can be formal or informal which depends on the context or circumstance.

Second, talk as transaction. It emphasises on the purpose of the talk. Some skills for this kind of speaking are turn-taking, opening and closing conversation, using an appropriate style of speaking.

Third, talk as performance. It refers to public talk or public speaking. For example, classroom presentations, public announcements, speeches. This talk is in the form of monologue. There is a format as a fixed pattern. the style is quite similar to written language. The examples of talk as performance are giving a class report about school trip, making a sales representation, and giving a lecture.

### **Roles of Teachers in the Classroom (Cindy, 2007)**

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Teachers play a vital role in language classroom. Teachers can be a lecturer who teach and give knowledge to students. Teachers can be a facilitator who supports learners learning. Teachers are also a mentor who gives feedback or criticism. Please be careful when a teacher gives a comment. This is because some students may be quite sensitive when they get a feedback. As a result, teachers must encourage students and build up their confidence. Teachers can be a role model who the students watch at the teacher and maybe sometimes imitate.

### **III. RESEARCH METHODOLOGY**

This paper was the qualitative research. The data was collected from the students who took part in this experiment. This research methodology consisted of three parts: a) participants, b) data collection, and c) procedure of analysis.

#### **a. Participants**

Under this study, 10 non-major students took part in this experiment. They were 3<sup>rd</sup>-year students whose majors are Electrical Engineering and Civil Engineering, Faculty of Engineering and Architecture, Rajamangala University of Technology Suvarnabhumi, Thailand.

#### **b. Data collection**

##### **a) Materials**

Two conversations used for making the clips were (a) going to the cinema and (b) making sandwich. The first conversation expressed how to give direction, and the second was how to make sandwich. These two conversations were constructed by the researcher, then validated by the experts in field. The conversations were created by based on the real life conversations, the student's ability, and Common European Framework of Reference for Languages (CEFR), so the language used was not too complicated for the participants' ability in this study.

##### **b) Instruments**

Four research instruments were as follows:

(a) A questionnaire was used as the first step to obtain the participants' information. This questionnaire was divided into three parts: Part I aimed to obtain participants' personal information (i.e. age, education, field of study), Part II was about examining the participants' English language exposure, Part III investigated the participants' access to the Internet/social media, Part IV aimed at finding out causes of unsuccessful English learning, and Part V was comments/suggestions.

(b) A speaking rubric was used to evaluate students' speaking performance from the two conversations.

(c) An observation form was used to observe participants while they were in the class.

(d) A semi-structured interview was used as the last step to obtain participants' in-depth details about their receptions towards their personal problems when learning English, the goal of learning English, the clips uploaded in Facebook and other related information.

All the instruments were constructed by the researcher, then validated by the experts in the field. After that, these instruments were tried out with non-sampling before using with the targeted sampling.

**c. Procedure of Data Analysis**

a) Before starting the research study, the questionnaires were administered to the participants. After that, the data from the questionnaire were collected and analysed by the researcher in order to create the conversations which based on the participants' ability.

b) In the classroom, the researcher observed and recorded what happened in the classroom. The researcher observed them and recorded what happened in the classroom. For example, what did they feel? Are there any improvement in terms of speaking skill? Did they pay attention to the class? How well did they collaborate in the classroom?

c) When the participants had a conversation, the speaking rubric was used to evaluate their performance.

d) Lastly, two weeks later after uploading the video clips, the participants were invited to the interview. They were asked about the video clips, their feeling when attending the class, their motivation, and other related information.

**IV. RESULTS AND DISCUSSIONS**

<b>Part I: English Language Exposure</b>	
<b>A: The frequency of getting to the English Language Exposure</b>	<b>percentage (%)</b>
a) more than 3 times a week	0
b) 2 times a week	38
c) 1 times a week	57
d) never	5
<b>B: Types of media in English language exposure</b>	<b>percentage (%)</b>
a) magazines, cartoon books, newspapers, novels, short stories	0
b) songs, music	69
c) TV program, series, drama	18
d) social media, chatting, blogs	13
e) Others (please specify)	0

This section consisted of results, discussions, implications, delimitations, and recommendations for further studies.

**Part I: Result Gained from Questionnaires**

**Table 1** English Language Exposure

From table 1, in relation to the frequency of getting to the English language exposure, it showed that most students (57%) got access to the English language exposure, followed by 38% of students accessed to the English language exposure. Last, 5% of

<b>Part II: The Access to the Internet /social media</b>	
<b>A: Frequency of getting to the Internet/social media</b>	<b>percentage (%)</b>
a) more than 5 times a day	70
b) 4-5 times a day	0
c) 2-3 times a day	20
d) 1 time a day	10
<b>B: Popular social media</b>	<b>percentage (%)</b>
a) Facebook	92
b) Line	89
c) Twitter	36
d) Pantip	69
e) Instagram	42
f) Others (please specify)	0

them never access to the English language exposure. In accordance with types of media in English language exposure, 69% of students liked to get access to English songs or music, followed by 13% of them preferred to get access to TV programs, series, drama. 10 % of them preferred social media, chatting, blogs.

**Table 2** The Access to the Internet/social media

Table 2 expressed the Internet/social media. In terms of frequency of getting to the Internet/social media, it appeared that 70% of students got to the Internet/social media more than 5 times a day. Second, 20% of them got access to the Internet/social media 2-3 times a day.

In accordance with the popular social media, it showed that 92% of them preferred Facebook, followed by Line (89%). The others were quite less popular.

<b>Part III: Reasons of unhappy English subject</b>	
<b>Reason of unhappy English subject</b>	<b>percentage (%)</b>
a) Students have poor background of English	98
b) Students are shy to speak in the classroom	90
c) Students are lazy.	20
d) A teacher gives a bad feedback/comment without explanation	95
e) A teacher blames students (you)	93
f) Others (please specify)	0

**Table 3** Reasons of unhappy English subject

Table 3 expressed the reasons of unhappy English subject. It showed that there were various factors made them unhappy with English subject. First, 98% of students revealed that they had poor background of English, followed by a teacher gave a bad feedback/comment without explanation (95%), a teacher blamed students (93%), and students were shy to speak in the classroom (90%), respectively.

**Part II: Result gained from Teacher’s Observation**

The data obtained from this observation, it showed that, from the researcher’s view, it can be seen that most participants were satisfied with this class. They opened their mind and got along with the group very well. They felt that they got familiar with the teacher. It was obviously seen that when the teacher taught them about making sandwich, the second conversation, most of them felt enthusiastic to join this activity. It could be noted that most students liked to learn English via activity because they could understand the lesson better than sitting and listening to the teacher’s lecture.

**Part III: Result gained from the Conversation Speaking Rubric**

In terms of participants’ speaking performance, before they made a simulated conversations, a speaking rubric was provided to the participants to let them know the criteria. Therefore, they could practice their conversations based on this rubric. When assessing the student’s speaking skill individually, it can be seen that students’ speaking skill have improved. Some of them had highly improvement in speaking skill while some of them gradually improved. This may be that they had a different background of English language and their habits of inquiry of English language. However, some participants who had quite poor background of English language seemed to have high improvement. This was because of the supportive atmosphere in the classroom and the feedback provided by the teacher (researcher) in terms of speaking skill.

**Part IV: Result Gained from the Interview**

Two weeks later, after uploading the two video clips in Facebook, 10 participants were invited to the interview. The interview approximately lasted 10-15 minutes individually. In terms of their English language exposure, the participants revealed that they did not frequently get access to the English language. They felt that they were not familiar with it. In relation to their motivation, while they were in the classroom, they were very satisfied with this class. This may be that the atmosphere in the class was very friendly. They wanted to join this kind of English classroom. Moreover, they revealed that the teacher gave them a good advice, and the teacher supported students’ learning well.

In terms of video clips uploaded in Facebook, the participants stated that the feedback of the their two video clips were good. They were satisfied with it. However, it should be noted that, under this study, motivation played a vital role on participants’ language learning. This positive feedback made them more confident and being more motivated.

**Discussions**

From the findings of this study, it can be discussed as follows:

1. It showed that the frequent problematic areas of speaking skill was that they had poor background knowledge of English subject, teachers gave a bad comment or feedback without any explanation, teachers blamed students in front of the

others, and students were shy to speak in front of the class. This is in line with Nadeem and Arshad (2010) that the problems of speaking English refers to these factors which are similar to the present findings in this study.

2. In relation to students' speaking skill, it appeared that before they attended this special classroom, they had poor English speaking skill. When this class finished, it seemed that most participants had high improvement on English speaking skill. This may be that there were only 10 participants in this experiment; so the teacher could support and took care of them well. In this case, it showed that the number of size-class was important.

3. Students' motivation was higher than expected. This may due to that when a friendly and supportive atmosphere in the class were created, students enjoyed the classroom and willing to do activities in the class well. This was in line with Nasser and Majid (2011), Nazifah, Shafiq, Farhinaa, Othman (2012), and Mas (2016)) that the use of motivation created the great motivation in students to attend or learn English very well.

4. In terms of social media integrated in this study, it showed that social media did not increase student's speaking performance. On the contrary, this kind of media interested students more attention to the classroom.

## Implications

The findings from this study could be implied in the equational settings as follows:

- a. Learners should be encouraged to spend extra time to improve speaking skill and get involved in English language.
- b. Learners should be motivated to keep practicing speaking skill although the class is finished. A speaking skill club or speaking activities should be set up regularly for students' practice.
- c. As a teacher, English should be taught as the mean of communication in real life, not a compulsory course in the schools or universities.
- d. The supportive environment should be held to encourage students's learning. Teachers should shift the role to be the facilitator as well. As a result, learners feel happy and open-mind to talk to the teacher.
- e. Educational technology can be brought to the classroom a to arouse the learners as the active learners.

## Delimitations

As the first plan, five conversations were going to be used in this experiment. However, due to the researcher's duty and the university's plan, it sometimes could not get along together with the students' learning schedule. Finally, only two

conversations were used in this study: how to go to the cinema and making sandwich.

## Recommendations for further studies

In terms of the recommendation for further studies should be that how the motivation plays a great role on other skills--listening, speaking, or writing. In addition, other skills--listening, writing, and reading. Furthermore, according to the findings under this study, it appeared that social media, Facebook, influenced the learners' interest and motivation. However, it was not revealed that social media could encourage the learner's performance towards English learning. As a result, this aspect should be continually investigated.

## V. CONCLUSIONS

According to the research objectives, it can be summarised that:

1. Before taking part in this study, the participants had the poor background, low motivation in learning English, or bad experiences in English learning at schools or university, considering the speaking rubric, the observation, and the individual's interview, their speaking skill was higher.
2. Students' motivation towards speaking skill in this experiment significantly increased. This could result from the supportive environment in the class, the teacher who acted as the facilitator, and the use of educational technology in the classroom. Therefore, students felt satisfied with this class and tried to improve themselves in terms of speaking skill.

## APPENDICES

sample questions in the observation form

1. How did they feel today?
2. Are there any improvements in terms of speaking skill?
3. Did they pay attention to the classroom?
4. How well did they collaborate with their friends in the class?
5. What activity did they like the most?
6. How about their face expressions?

sample questions for semi-structured interview

1. How often do you use the Internet?
2. What program/application do you like to watch/listen?
3. What is your bad experience about learning English?
4. What English skill are you unhappy?
5. Why do you want to be good at speaking?
6. What do you feel when you read the comments from your friends?
7. Although the class is finished, will you want to continue improving your speaking skill?

## REFERENCES

- Clare L. (n.d.) *Ways to Encouraging More Use of English in Class*. Retrieved 12 December, 2018 from

- <https://www.teachingenglish.org.uk/article/ways-encourage-more-use-english-class>.
- BBC Thai (2018). *Why Thais' English Score Have Been Poor for 8 Years?* Retrieved 24 May, 2020 from [https://www.khaosod.co.th/bbc-thai/news\\_1784446](https://www.khaosod.co.th/bbc-thai/news_1784446)
- Cindy H. (2007). *Ten Roles for Teacher Leaders*. Retrieved 5 May, 2020 from <http://www.ascd.org/publications/educational-leadership/sept07/vol65/num01/Ten-Roles-for-Teacher-Leaders.aspx>
- Fadel H.M. and Khaled M. (2013) *The Impact of Motivation on English Language Learning in the Gulf States*. Retrieved 24 March, 2020 from <https://files.eric.ed.gov/fulltext/EJ1067550.pdf>
- Five Reasons Why You can't Speak English*. Retrieved 24 March, 2020 from <https://www.britishcouncil.or.th/english/tips/5-reasons-why-you-cannot-speak-english>
- Jack C. R. (2008). *Teaching Listening and Speaking: From Theory to Practice*. Retrieved 12 December, 2018 from <https://www.professorjackrichards.com/wp-content/uploads/teaching-listening-and-speaking-from-theory-to-practice.pdf>
- Jedsarid S., Kettawa B., Santana K. (2015). Situations and Problems in Learning English at Secondary Schools Affiliated with Municipalities in the Three Southern Border Provinces. Proceedings of the Hadyai University National Conference. Songkhla: Hadyai University.
- Mas D. I. (2016). *Students' Motivation in Speaking English*. Journal of English Educators Society, Vol. 1, 31-48.
- Motivation. (2019). Retrieved 12 December, 2018 from <https://dictionary.cambridge.org/dictionary/english/motivation?q=motivation>
- Motivation. (2019). Retrieved 12 December, 2018 from <https://www.ldoceonline.com/dictionary/motivation>
- Motivation. (2019). Retrieved 12 December, 2018 from <https://www.oxfordlearnersdictionaries.com/definition/english/motivation>.
- Nadeem K. and Ali A. (2010). *Improving the Speaking Ability in English: The Students' Perspective*. Procedia- Social and Behavioral Science, 2, 3575-3579.
- Nasser O. and Majid V. (2011). *Motivation, Attitude, and Language Learning*. Procedia- Social and Behavioral Science, 29, 994-1000.
- Nazifah H., Shafiq H., Farhina O., Othman. (2012). *Enhancing Students' Motivation by Providing Feedback Writing: The Case of International Students from Thailand*. International Journal of Social Science and Humanity, Vol. 2, No. 6.
- Phanitkul I. (2015). *"A Teacher of English"....the Crisis in Thai Education?* Retrieved 24 March, 2020 from <https://www.posttoday.com/politic/report/402500>
- Tukko N. (2009). What is Social Media? Retrieved 4 March, 2020, from <https://www.marketingoops.com/media-ads/social-media/what-is-social-media/>
- Wachirawit K. (2016). *Why Vietnam Education is Beyond Thailand? and Why Singapore is One of the Best Education in the World?*. Retrieved 24 March, 2020, from <https://themomentum.co/momentum-feature-thai-education-system>
- Weeraphong R. (2018). *Thais and English Language*. Retrieved 24 March, 2020, from <https://www.prachachat.net/opinion-column/news-190406>
- Vicky Z. (n.d.) *7 Ways to Motivate your Students to Speak Out..* Retrieved 12 December, 2018 from <https://busyteacher.org/18413-motivate-students-to-speak-out-7-ways.html>
- Zoom (2013). *Thais Are Really Poor At English...Don't Panic!* Retrieved 24 March, 2020 from <https://www.thairath.co.th/content/374647>

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