Research Article

EFFECTS OF BLENDED LEARNING INSTRUCTION USING FLIPPED CLASSROOM MODEL ON ENGLISH ORAL ACADEMIC PRESENTATION ABILITY OF UNDERGRADUATE STUDENTS IN WORK INTEGRATED LEARNING PROGRAM

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Abstract

English oral academic presentation is one of the communicative skills required by educational institutions and workplaces. In terms of workplaces, especially international firms, they require both actual employees and apprentices or work-integrated learning students to present information in English on many occasions. However, the Work-integrated Learning (WiL) students have encountered many difficulties, especially when the students have to work as full-time employees in the daytime and study in the evening. This study aimed to investigate the effects of blended-learning instruction using the flipped-classroom model on English oral academic presentation and explore the attitudes after implementation via a mixed research method. The sample consisted of 12 second-year Engineering undergraduate students (transfer program) enrolling in the WiL program at Rajamangala University of Technology Lanna using the purposive sampling method. The instruments comprised pretest and posttest, rubrics, interview questions, and a fortnight block course instructional plan. The results revealed significant increases in verbal skills, $\overline{X}$ = 11.67 and 14.08 out of 28, and non-verbal skills $\overline{X}$ = 4.41 and 6.08 out of 12 in pretest and posttest protocols, respectively. The qualitative analysis explored positive results that the course helped develop the English oral academic presentation ability.

Keywords: Blended-Learning, Flipped-Classroom, Oral Communication, Academic Presentation, Work-Integrated Learning

Background

Work-integrated Learning (WiL) is a pedagogical approach combining academic knowledge with work practice. Across multiple WiL programs at Rajamangala University of Technology Lanna (RMUTL), the WiL for Undergraduate Students of the Bachelor of Engineering in Agricultural and Biological Engineering (Continuing Program) Curriculum in joint with Siam Micheline Company (Hat Yai) is the latest. Across various subjects available in the curriculum, Academic English (GEBLC103) is the third English course that aims to equip students with academic skills through listening, speaking, reading, and writing, including the ability to give presentations connected to specific

contexts (Rajamangala University of Technology Lanna, 2017). A presentation ability is significant for educational purposes, and the labour market as employers require employees to convey information professionally (Crosling & Ward, 2002, pp. 41-45; Alshare & Hindi, 2004, pp. 6-15). Hence, the course implementation converges on giving proper presentations by using the English language as a medium.

Previous teaching experiences with the students' recounting revealed one of the students' difficulties in language practice - time constraints, videlicet the students worked in the daytime and studied in class in the evening. Hence, they had little time to revise knowledge and do homework, resulting in an inability to practice using the target language. Thus, it is momentous to employ a pedagogical approach that allows more flexible time. After contemplating various methods, blended learning -- the mixture between a traditional classroom (face-to-face) and e-learning, is the most appropriate. Blended learning can enhance the students' learning and practising scheme by creating a ubiquitous environment. Hence, the pedagogy is more accessible, engaging, flexible, and relevant, and the students can learn at any place and at any time (Graham, 2006, pp. 3-21; Xue et al., 2011, pp. 7878-7880). Among various BL instructional models, the flipped-classroom (FC) model is the most advisable due to the idea of switching traditional lecture in a classroom to home activities via online lessons and other content-related media, and vice versa (Long et al., 2017, pp. 179-200; Flipped classroom, n.d.). As a result, students can have more time to study compelling content and practising activities in their leisure time online before learning from their peers in class.

To sum up, in this study, English oral academic presentation is the target of development in both online and face-to-face situations via blended-learning instruction using the flipped-classroom model. The context and the information employed in this study are part of the participants' research studies introduced to and approved by the curriculum committee.

Research Questions

This study aimed at discovering answers to the following research questions:

1. To what extent does blended learning instruction using the flipped-classroom model affect students' English oral academic presentation ability?

2. What are the attitudes of the students towards blended learning instruction using the flipped-classroom model?

Research Objectives

This study aims:

1. To investigate the effects of blended learning instruction using the flipped-classroom model on English oral academic presentation ability.

2. To explore the attitudes of the students towards blended learning instruction using the flipped-classroom model on English oral academic presentation ability.

Statement of Hypothesis

The students' English oral academic presentation ability will improve at $p \leq .05$ after taking blended-learning instruction using the flipped-classroom model on English oral academic presentation.

Scope of the Study

The second-year undergraduate students (transfer curriculum) majoring in Agricultural and Biological Engineering of Rajamangala University of Technology Lanna's WiL program and working at a rubber manufacturing site in the academic year 2020 participated in a block-course cycle – 3 hours a day, for a total of 14 days continuously. The contents employed in the main study were the research projects introduced to the curriculum committee and the workplace. Hence, it is crucial to conceal some susceptible contents due to their trade secrets and intellectual property.

Theoretical Framework

The theoretical framework in this study covers blended learning instruction, flipped-classroom model, oral communication, academic presentation, and Academic English course as briefly explained below and shown in Figure 1.

Blended Learning Instruction is a pedagogical approach combining two learning modes: face-to-face and computer and technology use. The significance and benefits of blended-learning instruction are tremendous, such as improving pedagogy, increasing flexibility, increasing cost-effectiveness, and creating a more eco-conscious environment (Graham, 2006, pp. 3-21; Pourre, 2020). However, it is significant to consider the level where blend occurs. Graham (2006, pp. 3-21) mentioned four levels of blend: activity, course, program, and institutional levels. The course level is the most suitable for the study since it allows a combination of face-to-face and computer-mediated environments throughout a course. In contrast, the activity level focuses on specific learning activity, the program level provides an opportunity to students to choose between a combination of face-to-face and online or one of the two prescribed in the program, and the institutional level refers to the use of blended learning as a medium of instruction within an institution.

Flipped-classroom Model creates an opportunity to move traditional in-class activities to online-based activities and vice versa. The model derives from the revised Bloom's Taxonomy by flipping the pyramid starting from the online before-class activities: remembering and understanding, followed by the in-class activities in which students, engaged with peers and teachers in a classroom, tackle higher cognitive levels: applying and analyzing. Finally, students work on after-class activities online: evaluating and creating (Wikipedia, n.d.; Michigan State University, n.d.; Long et al., 2017, pp. 179-200).

Oral Academic Presentation considers both verbal and nonverbal skills between interlocutors and visual and technological elements to present research as a part of the educational process. Moreover, oral academic presentation is not only required by educational institutions, but it is also crucial to workplaces (Crosling & Ward, 2002, pp. 41-45; Brown, 2004, p.157; Devito, 2008, pp. 103-108; Mavrodieva, 2012). Hence, it is significant to this study to touch upon both verbal and non-verbal skills. For verbal skills, the main emphasis placed on a range of language,

accuracy, fluency, coherence, vocabulary, pronunciation, and research method coverage. For non-verbal skills, the main focus placed on body language, facial expression, and eye movements.

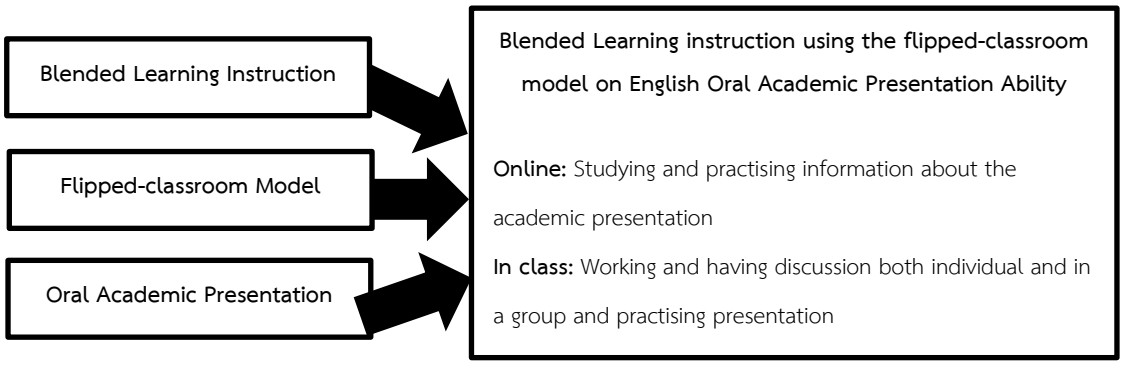

Figure 1 Conceptual Framework

Research Methodology

Conducting the research study comprises of many steps. This section provides the significant components employed in the research study.

Population and Sample

The population in this study was the WiL students enrolled in RMUTL. The sample was selected using a purposive sampling method. They were the second-year undergraduate students (transfer program) of the academic year 2020 working at the rubber manufacturing site in Hat Yai, Thailand, in a total of 12, both males and females.

Research Instruments

The research instruments were constructed based on blended learning instruction, flipped-classroom model, and oral academic presentation concepts. All of the tools were developed by the researcher and validated by the experts. The details of the instruments were as follows:

1) English Oral Academic Presentation Test

It is significant to use the pretest and posttest as instruments for examining the student's English oral academic presentation ability. Each test-taker makes an oral academic presentation on the topic and content from his/her research project proposed and approved by the research committee. The test's evaluation criteria focused on both verbal skills: range, accuracy, fluency, coherence, vocabulary, pronunciation, and coverage of research methods, and non-oral skills: eye contact, body language, and poise. The presentation was 10 minutes per test-taker, including questions and answers. A panel of 3 experts validated the English Oral Academic Presentation test: 2 Thai English teachers and one native English teacher using a 3-rank IOC checklist (+1, 0, -1) consisted of 8 criteria adapted from Bachman and Palmer's (1996, pp. 43-60) framework to gain validity and reliability. The results revealed that all the experts rated 1 in all benchmark, which represented high validity and reliability in the developed test.

2) English Oral Academic Presentation Rubrics

The rubrics were explicitly adapted from IELTS Speaking Band Descriptors (public version) (IELTS, 2020) and Talk as Performance Rubric (Tangjjitnusorn, 2015, pp. 236-237), together with the aspects of spoken language

used introduced by the Common European Framework of Reference for Languages (CEFR) standard (CEFR, 2020). The rubrics consisted of 2 parts to investigate the sample's verbal and non-verbal oral academic presentation ability. The first part - verbal skills, emphasized range, accuracy, fluency, coherence, vocabulary, pronunciation, and coverage of research methods, while the second part - non-verbal skills, focused on eye contact, body language, and poise. After implementing the pretest and posttest, three human raters: two Thai-native English teachers and one native English teacher, rated the scores. The rubrics were 5-scale scores - 0 to 4 - that is, 4 refers to the highest score, and 0 refers to an absence from the test. The total scores of the oral skills are 28, and the non-verbal skills are 12. In terms of rubric validation, a panel of 3 experts: 2 Thai English teachers and one native speaker of English teacher used a 3-rank IOC checklist (+1, 0, -1 consisted of 8 criteria adapted from Bachman and Palmer's (1996, pp. 43-60) framework to gain validity and reliability. The results revealed that the experts rated 1 in all criteria, representing high validity and reliability in the developed rubrics.

3) Interview Questions

The interview questions were significant to obtain the sample's attitudes after participating in the blended learning instruction using a flipped-classroom model on English oral academic presentation ability. The questions consisted of 2 parts: In-class Session and Online Session. In the first part – In-class Session, the questions mainly focused on the sample's satisfaction with the effectiveness of in-class activities, including individual discussion, group discussion, presentation by topic, and recommendations for further implementations. The second part – Online Session, captured the sample's satisfaction with the effectiveness of online activities, including recorded lecture and video-watching. Besides, the sample was to provide recommendations for further implementations. To gain the validity of Flipped-classroom Instruction on English Oral Academic Presentation Interview Questions, the researcher asked a panel of 3 experts: 2 Thai English teachers, and 1 native speaker of English teacher, to validate the interview questions using a 3-rank checklist (+1, 0, -1). The checklist consisted of 8 criteria adapted from Bachman and Palmer's (1996, pp. 43-60) framework. The validation process results were that the experts rated 0.67-1, which represented high validity and reliability in the set of interview questions. The researcher revised the questions following the suggestions from the experts by adding some questions to cover the study's objectives.

4) Flipped-classroom Instruction on English Oral Academic Presentation for Work-integrated Learning Students Block Course Plan

In this study, a block course instructional plan was developed to support the research and learning goals. The plan consisted of both in-class and online activities in a fortnight, continuously. In details, on the first day, the sample was to participate in class activities, including orientation, research objectives, and instructional plan, followed by the online activities: lecture and video-watching, language and presentation by topic practices. During the 2^{nd} – 13^{th} day, the sample was to continuously learn in a cycle of 3 hours in-class and 1 hour online sessions. In addition to the in-class session, the students were to bring feedback from the previous online session to discuss individually with the teacher and group with peers, followed by practising language use. For the online session, they watched lectures and videos assigned by the teacher, followed by practising language and techniques significant for

the target topic of presentation. On the last day of the course, the sample summarised all ideas and techniques they had learned and made a final presentation.

Data Collection

Implementing the blended-learning instruction using the flipped-classroom model on English oral academic presentations was in a block course module from February 24 – March 6, 2020. The sample – 12 students who participated in the study enrolled in Academic English (GEBLC103) in 2019. Figure 2 illustrated the data collection.

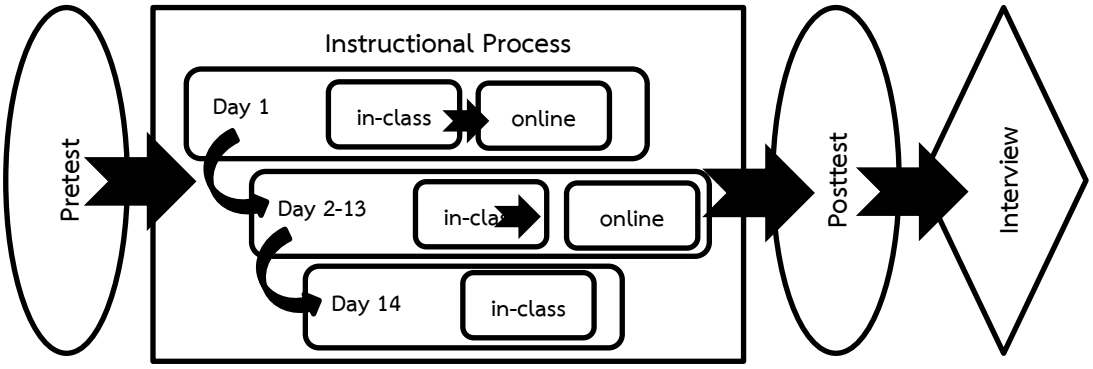

Figure 2 Data Collection

Data Analysis

In this study, the researcher employed a mixed research method to investigate the effects of flipped-classroom instruction on English oral academic presentation. The quantitative data were retrieved from pretest and posttest results using descriptive statistics: mean and standard deviation, and non-parametric statistics: Wilcoxon Signed-Rank Test, whereas the qualitative data were from interviews using content analysis.

Findings

The study of blended-learning instruction using the flipped-classroom model on English oral academic presentation consisted of 2 main research questions.

Findings of research question 1

The pretest and posttest analysis explained by descriptive statistics and the Wilcoxon Signed-Rank test were presented in Tables 1 and 2 followed by the results from content analysis.

Table 1 Quantitative result for the flipped-classroom instruction on English oral academic presentation ability: Verbal skills

	Min (28)	Max (28)	Mean	SD	Wilcoxon Signed-Rank Test	
					Z	Sig (2-tailed)
Pretest	10	15	11.67	2.01	-3.097	0.002
Posttest	13	17	14.08	1.37		

According to Table 1, the Wilcoxon Signed-Rank test results illustrated the score increase of verbal skills with statistical significance ($p \leq .05$) with the mean of pretest and posttest at 11.67 and 14.08 in a total of 28, respectively. The following statements explain the results in more details.

The posttest scores revealed the improvement in various verbal skill traits. When considering the students with total posttest scores ranged from 15 to 28, a majority of them showed the shortening of pauses between words and sentences. Besides, the flow of speech improved with less repetition and self-correction. For vocabulary, they could produce words more extensively and suitable for the context. The last noticeable improvement is the coverage of research methods that students could present information covering the research methodology procedures. However, they were still unable to answer the questions raised by the audience properly.

Regarding the students with total posttest scores below 15, they outstandingly developed their language skills in terms of range, coherence, and coverage of research methods. To explain, the students showed the development in the use of language with more minor hesitations in selecting words or phrases to convey the information. However, most of their sentences were of a simple type. For coherence, they showed an advance in linking sentences by using cohesive devices. Still, they failed to use the correct ones, or some of the connectives they used broke down the coherence between sentences.

Table 2 Quantitative result for the flipped-classroom instruction on English oral academic presentation ability: Non-verbal skills

	Min (12)	Max (12)	Mean	SD	Wilcoxon Signed-Rank Test	
					Z	Sig (2-tailed)
Pretest	3	7	4.41	1.62	-3.025	.002
Posttest	5	8	6.08	1.08		

According to Table 2, the Wilcoxon Signed-Rank test results illustrated the score increase of non-verbal skills with statistical significance ($p \leq .05$) with the mean of pretest and posttest at 4.41 and 6.08 in a total of 12, respectively. To put it simply, the students showed high improvement in terms of eye contact and body language. For the poise, the students showed slight improvement. Notwithstanding, the students having total posttest scores below 15 showed the most noticeable improvement.

To sum up, the sample's English oral academic presentation ability significantly increased in both verbal and non-verbal skills. Though some points might improve very little, they tended to increase in positive ways.

Findings of research question 2

After implementing the course, the sample was to respond to open-ended questions in the questionnaire to explore their attitudes. The questionnaire consisted of 2 parts to explore the students' attitudes towards flipped-classroom instruction ability online and out of class stages.

The first part of the interview focused on the sample's attitudes towards the flipped-classroom instruction on English oral academic presentation ability activities: individual discussion, group discussion, and presentation by topic, in an online stage. The results revealed that a majority of the sample were most satisfied with the group discussion. They mentioned that they had an excellent opportunity to share the experience of previous online

practices among classmates. One enchanting feedback was from Student A, *"The group activity in a classroom helps have friends who are good at English give suggestions on which words I must use in each topic."* Besides, the sample with low English oral academic presentation ability could ask those who had an outstanding performance for bits of help and suggestions, as can be seen in the response of Student B, *"Sometimes I think I pronounce words correctly. But, when talking to friends in a group, some words are mispronounced. Then they help correct them."* The other activities: presentation by topic and individual discussion, also yielded exciting results. Besides, additional recommendations for implementing the course in the future were also positive. Most of the sample believed that the in-class activities could help them develop their English oral academic presentation ability.

The second part of the interview emphasized the sample's attitudes towards the online activities: the recorded lecture and video-watching. The results discovered that a majority of the sample were satisfied with both activities almost equally. They reported that both video and lecture-watching activities allowed them to review lessons repeatedly and ubiquitously. For example, Student C, one of the students, commented, *"Learning online is good at finding the most suitable time. Sometimes, I want to complete personal duties so that I can fully learn."* Another interesting response was from Student D, *"I like the lectures that the teacher gives links because they are not too long. I can play back-and-forth. I also like VDOs because they are examples that I can follow, such as practising pronunciation, facial expression, and body movement."*

In summary, the sample's attitudes towards blended-learning instruction using the flipped-classroom model were optimistic. They considered that the protocol could help develop their English oral academic presentation ability through in-class and online activities.

Discussions

The results in this study discovered a significant increase in the sample's English oral academic presentation ability after participating in the blended learning instruction using the flipped-classroom model environment. The findings from the first research question also confirm the results from other studies. For example, Köroğlu and Çakır (2017, pp. 42-55) investigated the effects of flipped-classroom instruction on pre-service English language teachers' speaking skills through the quantitative method with 23 participants. The results were that the flipped-classroom instruction affected the development of the sample's speaking skills, especially in terms of fluency, coherence, lexical resources, grammatical range, accuracy, and pronunciation. Likewise, Quyen and Loi (2018, pp. 90-97) studied how the flipped model improves students' English-speaking performance with 60 students. The results were that the flipped model enhanced the students' English-speaking performance in all criteria, including pronunciation, grammar, vocabulary, content, and fluency. Yeşilçınar (2019, pp. 206-234) studied with 22 voluntary academicians and revealed that the flipped-classroom model enhanced the sample's verbal skills, including fluency, vocabulary, grammar, comprehension, and overall. However, the results of Yeşilçınar were against Köroğlu and Çakır (2017, pp. 42-55) and Quyen and Loi (2018, pp. 90-97) in the domain of pronunciation. In terms of non-verbal skills, the present study results also conformed with previous studies. For example, Abdullah et al. (2020, pp. 223-241) explored the effects of flipped-classroom model implementation on EFL learners' self-confidence in English speaking performance with 27 undergraduate students. The results were that the students had higher self-confidence in

English speaking performance, including non-verbal communication. Interestingly, the results revealed that the non-verbal communication of the sample increased more than verbal communication.

Regarding the second research question, the results were similar to previous studies regarding the benefits of blended-learning instruction. One example was Thummanond (2020, p. 146) the effects of using blended learning programs on the learning engagement of undergraduate students. The study revealed the benefits of an online session that students can rewind to review lessons anytime. Similarly, Tangjitnusorn and Sukavatee (2016, p. 24) discovered positive attitudes of the third-year undergraduate students towards hybrid-learning activities in studying the effects of community-based instruction using hybrid-learning on English oral communication for the tourism industry of undergraduate students.

In brief, the blended learning instruction using the flipped-classroom model can increase the students' English oral academic presentation in both in-class and online sessions. Besides, the students tend to have positive attitudes and are satisfied with the instruction since it helps develop their English oral academic presentation ability in both verbal and non-verbal skills.

Limitations of the Study

Although this research study yields intriguing results, there are some issues of practicality and uncontrollable variables required to acknowledge as follows:

1. The context of the study emphasized the research project of the engineering students. Hence, the results from this study could differ from other studies.

2. The block course module allows the students to study for 14 days continually. Consequently, the results of this study might be incomparable with other studies with a more extended period.

Recommendations for Further Study

Based on the findings, the recommendations for future research are as follows:

1. Since this study investigated the English oral academic presentation ability of the engineering students, it is recommended that further studies should emphasize other groups of students – both English major and non-English major.

2. For the reason that this study employed the blended learning instruction: the course level (Graham, 2006, pp. 3-21), future studies should contemplate the most suitable level of the blend to meet the objectives of the study and requirements of the course.

3. Inasmuch as this study manipulated the flipped-classroom model to bridge the significant gap of the students – time constraint, it is recommended for further studies to investigate core points or problems before selecting the instructional model as a treatment of the studies.

References

Abdullah, M., Hussin, S., & Ismail, K. (2020). Exploring the effects of flipped classroom model implementation on EFL learners' self-confidence in English speaking performance. *Recent Advances in Intelligent Systems and Smart Applications* (pp. 223-241). Springer, Cham.

Alshare, K., & Hindi, N. M. (2004). The importance of presentation skills in the classroom: Students and instructors perspectives. *Journal of Computing Sciences in Colleges*, 19(4), 6-15.

Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice*. Oxford: Oxford University Press.

Brown, H. D. (2004). *Language assessment principle and classroom practices*. United States of America: Longman.

CEFR. (2020). *Qualitative aspects of spoken language use - Table 3 (CEFR 3.3): Common reference levels*. Retrieved November 25, 2020, from https://www.coe.int/en/web/common-european-framework-reference-languages/table-3-cefr-3.3-common-reference-levels-qualitative-aspects-of-spoken-language-use

Crosling, G., & Ward, I. (2002). Oral communication: the workplace needs and uses of business graduate employees. *English for Specific Purposes*, 21(1), 41-57. DOI:10.1016/S0889-4906(00)00031-4

Devito, J. A. (2008). *Essentials of human communication* (6th ed.). United States of America: Pearson Education.

Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In Bonk, C. J. & Graham, C. R. (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3–21). San Francisco, California: Pfeiffer.

IELTS. (2020). *Speaking: Band descriptors (public version).* Retrieved November 23, 2020, from https://www.ielts.org/-/media/pdfs/speaking-band-descriptors.ashx?la=en

Köroğlu, Z. Ç., & Çakır, A. (2017). Implementation of flipped instruction in language classrooms: An alternative way to develop speaking skills of pre-service English language teachers. *International Journal of Education and Development*, 13(2), 42–55.

Long, T., Cummins, J., & Waugh, M. (2017). Use of the flipped classroom instructional model in higher education: instructors' perspectives. *J Comput High Educ*, 29, 179–200. https://doi.org/10.1007/s12528-016-9119-8

Mavrodieva, I. (2012). *Rhetorical features of academic presentations*. Retrieved April 5, 2021, from https://rhetoric.bg/wp-content/uploads/ 2015/04/mavrodieva-i-issue-4-July-2012.pdf

Michigan State University. (n.d.). *What, why, and how to implement a flipped classroom model.* Retrieved January 14, 2021, from https://omerad.msu.edu/teaching/teaching-strategies/27-teaching/162-what-why-and-how-to-implement-a-flipped-classroom-model

Pourre, V. (2020). *The rise of blended learning.* Retrieved April 21, 2021, from https://www.bangkokpost.com/business/2025327/the-rise-of-blended-learning

Quyen, T. T. T., & Loi, N. V. (2018). Flipped model for improving students' English speaking performance. *Can Tho University Journal of Science*, 54(2), 90. https://doi.org/10.22144/ctu.jen.2018.012

Rajamangala University of Technology Lanna. (2020). *Goal*. Retrieved April 28, 2020, from https://www.rmutl.ac.th/page/vision?lang=en

Tangjitnusorn, K. (2015). *The effects of community-based instruction using hybrid learning on English oral communication for tourism industry of undergraduate students* (Doctoral dissertation). Bangkok: Chulalongkorn University.

Tangjitnusorn, K., & Sukavatee, P. (2016). The effects of community-based instruction using hybrid-learning on English oral communication for tourism industry of undergraduate students. *Journal of Education Naresuan University*, 18(4), 14-28.

Thummanond, C., Visessuvanapoom, P., Suraseth, C., Wintachai, J., Tantixalerm, C., & Tinmala, D. (2020). The effects of using blended learning program on learning engagement of undergraduate students. *Journal of Education Naresuan University*, 23(2), 140-151.

Wikipedia. (n.d.). *Flipped classroom*. Retrieved May 6, 2020, from https://en.wikipedia.org/wiki/Flipped_classroom

Xue, R., Wang, L., & Chen, J. (2011). Using the iot to construct ubiquitous learning environment. In *Proceedings of the 2nd International Conference on Mechanic Automation and Control Engineering (MACE 2011)* (pp. 7878–7880). https://doi.org/10.1109/MACE.2011.5988881

Yeşilçınar, S. (2019). Using the flipped classroom to enhance adult EFL learners' speaking skills. *PASAA: Journal of Language Teaching and Learning in Thailand,* 58, 206-234.