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## Development of an Instructional Model Based on Inquiry-Based Learning and 360 Degree Feedback Approaches to Enhance English Argumentative Writing Ability of Undergraduate Students (การพัฒนาแบบการเรียนการสอนตามแนวคิดการเรียนรู้แบบสืบเสาะร่วมกับแนวคิดการให้ข้อมูลย้อนกลับแบบ 360 องศา เพื่อส่งเสริมความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้งของนักศึกษาระดับปริญญาบัณฑิต)

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การพัฒนาแบบการเรียนการสอนตามแนวคิดการเรียนรู้แบบสืบสอบร่วมกับแนวคิด  
การให้ข้อมูลป้อนกลับแบบ 360 องศา เพื่อส่งเสริมความสามารถในการเขียนภาษาอังกฤษ  
เชิงโต้แย้งของนักศึกษาระดับปริญญาบัณฑิต

Development of an Instructional Model Based on Inquiry-Based Learning and  
360 Degree Feedback Approaches to Enhance English Argumentative Writing Ability  
of Undergraduate Students

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บทคัดย่อ

การวิจัยนี้มีจุดประสงค์เพื่อพัฒนาแบบการเรียนการสอนตามแนวคิดการเรียนรู้แบบสืบสอบร่วมกับแนวคิดการให้ข้อมูลป้อนกลับแบบ 360 องศา และศึกษาประสิทธิผลของแบบการเรียนการสอนเพื่อส่งเสริมความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้งของนักศึกษาระดับปริญญาบัณฑิต กลุ่มตัวอย่างคือ นักศึกษามหาวิทยาลัยเทคโนโลยีราชมงคลพระนคร ชั้นปีที่ 2 วิชาเอกภาษาอังกฤษ จำนวน 36 คน เครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูล คือ แบบทดสอบวัดความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้ง สถิติที่ใช้ในงานวิจัยได้แก่ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และค่าที่ t-test

ผลการวิจัยพบว่า 1. แบบการเรียนการสอนที่พัฒนาขึ้นประกอบด้วย 4 ขั้นตอน ได้แก่ ขั้นการกระตุ้นความสงสัย ขั้นการวางแผนการสร้างความรู้ใหม่ ขั้นการสร้างสรรคผลงาน และขั้นการสะท้อนคิดเพื่อการพัฒนา 2. การศึกษาประสิทธิผลของแบบการเรียนการสอน พบว่า 2.1) ความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้งของนักศึกษากลุ่มทดลองหลังการทดลองสูงกว่าก่อนการทดลองอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 2.2) นักศึกษากลุ่มควบคุมและกลุ่มทดลองมีความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้งไม่แตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

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**คำสำคัญ:** การพัฒนารูปแบบการเรียนการสอน / แนวคิดการเรียนรู้แบบสืบสอบ / แนวคิดการให้ข้อมูล  
ป้อนกลับแบบ 360 องศา / ความสามารถในการเขียนภาษาอังกฤษเชิงโต้แย้ง

### Abstract

The purpose of this study was to develop and study the effectiveness of an instructional model based on inquiry-based learning and 360 degree feedback approaches to enhance the English argumentative writing ability of undergraduate students. The sample was 36 sophomore English major students of Rajamangala University of Technology Phra Nakhon. The data collection instruments were the argumentative writing ability tests. Data were analyzed by the arithmetic mean, standard deviation, and t-test.

The findings of this study revealed that 1) the instructional model based on inquiry-based learning and 360 degree feedback approaches consisted of 4 steps: 1.1 stimulating curiosity, 1.2 making a plan to create new knowledge, 1.3 creating a new task, and 1.4 enhancing learning through reflection. 2) The results of the effectiveness of implementing the developed instructional model demonstrated that: 2.1) The experimental group's English argumentative writing ability was higher after studying with the developed instructional model at the .05 level of significance; and 2.2) the experimental group and control group had no significant difference in English argumentative writing ability at the level of .05.

**KEYWORDS:** INSTRUCTIONAL MODEL DEVELOPMENT / INQUIRY BASED-LEARNING  
APPROACH / 360 DEGREE FEEDBACK APPROACH / ENGLISH ARGUMENTATIVE  
WRITING ABILITY

## Introduction

Nowadays, English writing skills can be used as a tool to accomplish various goals. In higher education, the proficiency in English writing is one important required skill for students' future success. There are several genres of writing that students commonly encounter in a university. One is argumentative writing, which requires students to make a claim and provide strong evidence and reasons to support their claim so that their writing pieces become reasonable and convincing. Argumentative writing is the most important part of critical thinking and academic discourse (Hillocks, 2010). Meiland (1981) states that the essential tasks in higher education studies are to teach problem-solving and critical evaluation of topics under consideration. Argumentative writing is a difficult task for both English as a Second Language (ESL) and English as a Foreign Language (EFL) (Ka-kan-dee & Kaur, 2015). It requires effort and practice. Writing in a second language is even more difficult because it involves not only the ability to construct text, but also the ability to use the target language in order to express ideas effectively (Boonpattanaporn, 2007; Zhu, 2001). According to many researchers' findings, most Thai EFL students have faced many problems in producing argumentative writing: writing the thesis statement, providing solid evidence, development of arguments, presenting an organized idea, and vocabulary and grammar structure (Jantasin, 2015; Ka-kan-dee & Kaur, 2015; Zhu, 2001).

Inquiry-based learning is a constructivist approach to education (Education Development Center, 2006). Constructivism holds that whether or not there is an objective reality individuals actively construct and reconstruct their own reality in an effort to make sense of their experience. New information is filtered through mental structures (schemata) that integrate the student's prior knowledge, beliefs, and preconceptions. (Prince & Felder, 2006).

Many studies have supported the usefulness of inquiry-based learning in helping students develop their writing ability, especially in developing arguments, problem solving, giving reasons and connecting ideas. Neuby (2010) indicates that students are presented with a problem, some suggestions, and tools for finding the answer. They have constructed the knowledge by themselves with help from the instructor, through the problem, until they reach their answer. They learn by making connections from principle to practice and by collecting relevant facts in a logical order. Inquiry requires the identification of facts and assumptions, the use of critical thinking, consideration of a range of alternatives, and stimulates the mental processes towards a synthesis of information, application of principle, and evaluation of what has been done. Moreover, numerous studies found that inquiry-based learning could enhance reasoning ability (Chantraukrit, 2013; Dalai, 2008; Phiromrat, 2012; Ramkaew, 2009) as well as improve students' writing skills (Lestari, 2010; Sunarni, 2012). Therefore, it is assumed that students' argumentative writing ability could have continual improvement if teachers bring the principles of inquiry-based learning to practice or apply to teaching writing.

Another interesting approach to foster the argumentative writing ability of students is 360 degree feedback. 360 degree feedback can be particularly valuable feedback for the individual because it eliminates many problems of single-source feedback (London, 2003). Feedback is considered a critical teaching function that can be used to improve students' skills in analyzing their tasks critically (Keh, 1990). Mangelsdorf (1992) explains that students can learn how to use language and how to respond to peer feedback in order to improve their writing. The provision of well-designed feedback that is well structured takes learning forward. Feedback is defined as dialogue to support learning in both formal and informal situations, and it may enhance students'

reflection, their ability to monitor, evaluate and regulate their own writing and their metacognitive ability and their awareness of themselves as writers (Leibowitz, 2016). The teachers can reduce or remove some scaffolding so that the student is able to complete the task again on his own (Vygotsky, 1978). The value of 360 degree feedback to enhance learning is feedback from the lecturer, the peer and the student him or herself (Tee & Ahmed, 2014). As mentioned above, if we as teachers implement both traditional feedback and 360 degree feedback in teaching writing, it is possible that students perform better on their argumentative writing.

Although much research has been studied, less has been done with argumentative writing ability to combine the inquiry based-learning approach with others. Similarly, a lot of studies on the 360 degree feedback approach have become useful in business, but none has been applied to teaching writing. With the benefits of each approach, integrating them into one instructional model can amplify the benefits to teaching writing. The conceptual framework is shown in figure 1.

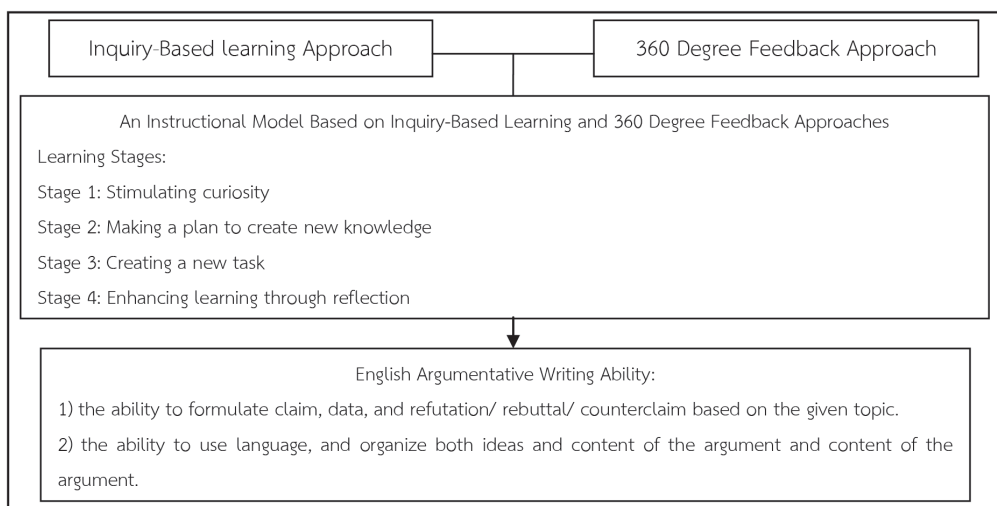


Figure 1 Conceptual Framework

## **Objectives**

1. To develop an instructional model based on inquiry-based learning and 360 degree feedback approaches to enhance English argumentative writing ability of undergraduate students.

2. To study the effectiveness of an instructional model based on inquiry-based learning and 360 degree feedback approaches by

2.1 comparing the English argumentative writing ability of undergraduate students in the experimental group and control group after studying with the developed instructional model.

2.2 comparing the English argumentative writing ability (both of overall score and scores in each component of English argumentative writing ability) of undergraduate students in the experimental group before and after studying with the developed instructional model.

## **Methodology**

### **Research design**

The study employed a quasi-experimental design. Pretest and post-test were used to determine the students' argumentative writing ability of the experimental group and control group. The scores from the two tests were compared by t-test in order to examine the effects of the traditional instruction and developed instructional model. The English argumentative writing ability tests were used to obtain the scoring data to determine students' argumentative writing ability.

### **Population and sample**

The population of this study was undergraduate English major students

from Rajamangala University of Technology.

The sample was 65 English major sophomores who enrolled in the English Paragraph Writing course in the second semester of the 2017 academic year at Rajamangala University of Technology Phra Nakhon. The experiment was conducted for one semester, which consisted of 10 periods (3 hours per week).

The sampling technique of this study was purposive sampling. The participants were divided into two groups: an experimental group and a control group. Each group consisted of 36 and 29 students respectively. To ensure that the two groups were comparable, group quality was statistically verified by t-test and the F statistic. The results revealed that the English argumentative writing ability of the experimental group and control group were not significantly different before the experiment, so they were suitable samples for the experiment.

### **Research instrument**

The research instruments consisted of 1) the developed instructional model, 2) argumentative writing ability test, and 3) argumentative writing ability rubric.

#### **1. Instructional model**

The instructional model was developed by using inquiry-based learning and 360 degree feedback approaches. The principles of the developed instructional model are relevant to the theories of learning underlying inquiry-based learning and 360 degree feedback approaches. The researcher provided the instructional model and two sample lesson plans based on the instructional model and had 5 experts validate them. The five experts validated the instructional model by using the index of item-objective congruence



(IOC), and all items rated higher than 0.5., so it was clear that the developed instructional model was efficient for the experiment. The instructional model and lesson plans were revised as experts suggested, and they were piloted with 30 English major students who were similar in all aspects to the participants at Rajamangala University of Technology Phra Nakhon. The researcher improved the instructional model and lesson plans after the pilot study session in order to increase the quality of teaching.

## **2. Argumentative writing ability test**

Two parallel paragraph writing tests served as the pretest and post-test of the study, respectively. The purpose of these tests is to assess the students' argumentative writing ability before and after the instruction. The test was a subjective type designed by the researcher and validated by five experts by using the index of item-objective congruence (IOC). All items were rated higher than 0.5, which means the developed argumentative writing ability test was effective. The English writing prompts were developed by the researcher. The topics were chosen based on the result of informal needs analysis. For the writing test, there are three topics, which the participants are asked to select one topic and write an argumentative paragraph of approximately 250 words within 45 minutes. The researcher revised and edited the tests to make sure that each test was reliable by using the suggestions of experts before piloting them with 10 English major students who were similar to the participants at Rajamangala University of Technology Phra Nakhon.

## **3. Argumentative writing ability rubric**

The analytical scoring rubric was used to assess the students' argumentative writing ability. The rubric was adapted from Krieger-James (2012),

Oregon Department of Education (2016) and Jantasin (2015). The developed rubric was validated by five experts. Based on the experts' suggestions, the researcher revised and edited the rubric. The rubric is in analytical form which assesses two main parts of the argumentative writing: 1) claim, reasoning and counterargument/rebuttal and 2) language use, ideas, and content. The assessment of part 1 consists of claim, data/evidence, and warrant. The assessment of part 2 aims to assess style, coherence and cohesion, vocabulary, and sentence structure. The total points are 21. Part 1's score is out of 9 points and part 2's score is out of 12 points. To ensure the reliability in scoring the argumentative writing ability test, an expert who has over 10 years of experience in teaching writing was asked to be another grader.

### **Data analysis**

For the quantitative data analysis, the researcher conducted the pretest and post-test to evaluate the English argumentative writing ability of students in the experimental group and control group. The developed writing rubric was used to evaluate the English argumentative writing tests. The test was graded by the researcher and another grader with the inter-rater rate of 0.96. The scores obtained from the writing rubric were analyzed using Independent t-test to compare the differences in the students' argumentative writing between the experimental group and control group after the implementation of each instruction. Dependent t-test was used to compare the students' argumentative writing in the experimental group before and after teaching utilizing the developed instructional model based on inquiry-based learning and 360 degree approaches.

## Results

The results of this study were consistent with the objectives of this study. As a result, the results were divided into two parts: Part 1 the components and learning stages of the developed instructional model based on inquiry-based learning and 360 degree feedback approaches, and Part 2 the effectiveness of the instructional model based on inquiry-based learning and 360 degree feedback approaches.

**Part 1:** The components and learning stages of the developed instructional model based on inquiry-based learning and 360 degree feedback approaches consisted of three components: 1) objective, 2) principles, and 3) learning stages.

### **1) Objective of the instructional model based on inquiry-based learning and 360 degree feedback approaches:**

This instructional model aimed to enhance English argumentative writing ability of undergraduate students.

### **2) Principles of the instructional model based on inquiry-based learning and 360 degree feedback approaches**

The developed instructional model consisted of 5 principles:

2.1) Learning occurs when students' curiosities are raised, or they have a controversial decision. Then students make attempts to find the answers and select information by using their critical thinking.

2.2) Using experiential learning in observing, analyzing, comparing, verifying and criticizing information or ideas promotes student understanding in learning, a wide range of creative viewpoints for task creativity and strategic learning, and as a result, they can bring these benefits to improve their learning.

2.3) Reflecting and connecting knowledge or ideas obtained from several sources helps students think systematically.

2.4) Learning with a process of multi feedback enhances scaffolding, and as a result, students have the chance to evaluate learning and capability of themselves and others, become aware of their weaknesses and strengths about task management, can synthesize knowledge and have various points of view for learning improvement and task development.

2.5) Applying previous knowledge and new useful information to develop task performance properly in a variety of situations helps learners improve their schemata, and thinking in writing.

### **3) Learning stages of the instructional model based on inquiry-based learning and 360 degree feedback approaches**

This developed instructional model has 4 learning stages:

#### ***Stage 1: Stimulating curiosity***

The first stage aims to raise learner curiosity, help learners have controversial ideas, express opinions using their own views in particular situations and exchange experiences or knowledge with others. This stage is divided into 3 sub-steps.

##### ***1.1 Cultivating student interest***

Teachers raise an interesting issue related to the learning objectives and provide different kinds of questions for students to observe, analyze and express opinions based on each provided question. The issue should be controversial, current, and interesting, such as different brands of mobile phone, some applications, or current news.

### *1.2 Exploring information and developing ideas*

Based on the provided situations/questions of teachers, students search for more detailed information from websites or provided documents to discuss with other students in small groups or in pairs.

*1.3 Making connections between prior learning and experience and exchanging information with others.*

Students analyze information, situations or provided issues with the help of teachers as facilitators. Students are required to look for information, compare their knowledge with peers and share opinions with other students. Teachers provide various activities for students, such as a debate, exchanging ideas via Facebook or Blog and discussion. Students are required to verify their understanding of the context by exchanging their work with other students, and then trying to correct the mistakes of others' tasks.

## ***Stage 2: Making a plan to create new knowledge***

The important aim of the second stage is to let the students make their plans in order to construct new knowledge. This stage is divided into 4 sub-steps.

### *2.1 Planning using inquiry*

Students check their prior knowledge, make plans to search for information and revise their plans based on the given questions, problems or situations. Teachers should provide some advice or useful learning sources for students, such as related websites and books.

### *2.2 Evaluating information sources*

Students evaluate the sources used for their writing using a checklist.

### *2.3 Conducting investigations*

Students collect information from several sources, such as websites, books and interview, and then determine whether the received information is relevant enough to keep.

### *2.4 Organizing ideas and examining the information*

Students reexamine if the information is in the logical order. The teachers can also ask the students to pair up and do peer feedback. In order to do so, students have to do the inquiry to be able to give the correct feedback to their peers.

## ***Stage 3: Creating a new task***

The purpose of this stage is to allow the students to apply their information to writing task based on each provided situation. This stage is divided into 3 sub-steps:

### *3.1 Searching information for outlining your first draft*

Students brainstorm ideas for outlining their first drafts based on the given topic. Teachers provide some samples of concept mapping to help students write their outlines clearly.

### *3.2 Editing and revising your outline*

Self-assessment and peer feedback are prepared for students with the goal of improving the outline. Students have to check and correct their outlines and have other students help them check their outline again.

### *3.3 Writing your first draft*

After receiving all feedback about their outlines from peers, teachers or other experts, students apply all obtained feedback to their first draft.

#### ***Stage 4: Enhancing learning through reflection***

The last stage's aim is to have the students reflect on their learning, problems and problem solving during the learning process. As a result, the students understand their strengths and weaknesses while learning and have guidelines for writing improvement. This stage is divided into 4 sub-steps.

##### *4.1 Individual reflection on writing task*

Students use a reverse outlining to check their writing before improving the writing. The checklist can also be used in this stage for checking the correctness of their first drafts and outlines.

##### *4.2 Conducting the full-circle feedback*

Students evaluate their own writing, and then teachers, peers or others will give some feedback to each student's paper by using several kinds and forms of feedback, such as direct feedback, indirect feedback (comments, symbols or questions), verbal feedback and written feedback. The checklist and grading can also be used in this stage. The teachers should prepare the criteria for giving feedback for the students and others.

##### *4.3 Editing and revising the final draft*

Students check all feedback obtained from several people and sources, and find solutions to revise their writing. The students can do the inquiry again to get more useful information to complete their writing.

##### *4.4 Reflecting on the learning process*

Students reflect on their writing, outlining, inquiry, and feedback in order to apply what they have learned to their future writing. In this sub-stage, teachers need to provide a questionnaire, reflective journal or open-ended questions to get more ideas from students about their learning.

**Part 2:** The effectiveness of the developed instructional model based on inquiry-based learning and 360 degree feedback approaches was investigated by pretest and post-test (the students' written products), and the findings of this study are shown in tables 1 and 2.

**Table 1** Comparison of the pretest and post-test mean scores of the experimental group (Total score = 21, n =36)

Argumentative writing ability	Pretest		Post-test		t	df	p-value
	M	SD	M	SD			
1) Claim, reasoning and counterargument/rebuttal	2.31	1.400	5.04	1.436	9.107*	35	0.000
2) Language use, ideas, and content	1.74	2.082	5.68	2.630	8.539*	35	0.000
<b>Total</b>	<b>4.04</b>	<b>3.250</b>	<b>10.72</b>	<b>3.883</b>	<b>9.640*</b>	<b>35</b>	<b>0.000</b>

Note. \* $p < .05$

In table 1, the total mean score of the pretest of 36 students in the experimental group is 2.31 ( $SD = 1.400$ ). The total mean score of the post-test of students in the experimental group is 10.72 ( $SD = 3.883$ ). The mean score of the pretest of the experimental group in part 1 (Claim, reasoning and counterargument/rebuttal) is 5.04 ( $SD = 1.436$ ) and in part 2 (Language use, ideas, and content) is 1.74 ( $SD = 2.082$ ). Moreover, the mean score of the post-test of the experimental group in part 1 is 5.04 ( $SD = 1.436$ ) and in part 2 is 5.68 ( $SD = 2.630$ ). The findings indicate that the experimental group's English argumentative writing ability was higher after studying through the developed instructional model at the .05 level of significance.



**Table 2** Comparison of the post-test mean scores between the experimental group and control group (Total score = 21)

Argumentative writing ability	Control group (n = 29)		Experimental group (n = 36)		t	df	p-value
	M	SD	M	SD			
1) Claim, reasoning and counterargument/rebuttal	4.45	2.237	5.04	1.436	1.238	45.65	0.222
2) Language use, ideas, and content	4.50	3.882	5.68	2.630	1.399	47.35	0.168
<b>Total</b>	<b>8.95</b>	<b>5.941</b>	<b>10.72</b>	<b>3.883</b>	<b>1.387</b>	<b>46.21</b>	<b>0.172</b>

Note. \* $p < .05$

In table 2, the post-test mean score of the experimental group is 10.72 ( $SD = 3.883$ ). The mean score of the posttest of the experimental group in part 1 is 5.04 ( $SD = 1.436$ ) and in part 2 is 5.68 ( $SD = 2.630$ ). Furthermore, the total mean score of the post-test of 29 students in the control group is 8.95 ( $SD = 5.941$ ). The mean score of the post-test of the control group in part 1 is 4.45 ( $SD = 2.237$ ) and in part 2 is 4.50 ( $SD = 3.882$ ). The findings indicate that the experimental group and control group had no different significance in English argumentative writing ability at the level of .05.

## Discussion

The results in table 1 revealed that the experimental group's English argumentative writing ability was higher after studying through the developed instructional model at the .05 level of significance. Therefore, it was obvious that the developed instructional model could enhance English argumentative writing ability of the students. This instructional model could help the students in the experimental group improve their argumentative writing ability.

According to the guidelines of this instructional model, the teacher had to prepare various activities to raise curiosity of students and let them find out the answers by themselves. Several learning resources and information were provided for students, and they had to construct knowledge by themselves. They learned to make connections between new knowledge and experience in a logically-ordered way. The students' main learning activities were discussion, exchanging ideas and sharing their knowledge with others. Students were stimulated to raise interesting issues in class and practice expressing their opinions on each issue. Additionally, they had to create their plans to get useful information from different sources to apply to their writing. To scaffold students' learning, 360 degree feedback was conducted in each learning stage. Teachers applied corrective feedback, incorrective feedback, self-assessment, peer feedback, teacher feedback and other experts' feedback to improve student learning. As a result, the students could construct logical arguments and, therefore performed better on language use, ideas and content. The 4 learning steps of the developed instructional model helped them make the claim and present relevant evidence to support the argument based on different issues logically. As stated, the learning process of the experimental group was relevant to constructivism theory of learning that claims learning is an active process in which students construct new ideas or concepts based on their current or past knowledge (Bruner, 1966). Furthermore, the results mentioned above can be supported by many experts' explanations about the effectiveness of 360 degree feedback. All in all, because of this evidence, the experimental group had higher scores of their argumentative writing ability after receiving the treatment.

In contrast, as seen in table 2, the experimental group and control group had no different significance in English argumentative writing ability

at the level of .05. The control group received the traditional instruction while practicing writing the English argumentative writing. The control group's learning activities consisted of 3 stages: pre-writing, writing, and post-writing. This finding could occur after the treatment since the students in the experimental group might not be familiar with the learning stages of the developed instructional model that required students to be more self-directed students. They had to learn to construct their own knowledge by using critical thinking and experiential learning. The learning of students arose out of an investigation and a variety of feedback types from several sources. Besides, another reason that had a vital influence on the writing ability of the experimental group was the efficiency of feedback. Participation and accurate, appropriate and meaningful feedback in Asian cultures is constrained by fear of mistakes, politeness norms, and the belief that peer feedback lacks credibility (Roskams, 1999). However, if students have more chance to practice giving feedback, it will be more useful to their learning in the long run. Once the students master the task with the benefits of feedback or scaffolding, the scaffolding can then be removed, and the student will be able to complete the task again on his own (Vygotsky, 1978). Although several researchers have claimed that peer feedback in writing classes is useful because of the cognitive, and social benefits of peer feedback, a number of studies challenged the strong positive comments about peer review and cautioned that some peers are likely to comment on surface errors and give advice that does not help revision (Bijami, Kashaf, & Nejad, 2013). However, nowadays, peer feedback has been known as a critical technique for improving students' writing all around the world (Bijami et al., 2013). Hyland (2003) mentions that peer feedback encouraged students to participate in the classroom activity and made them less passively teacher dependent. So, teachers need to be more concerned

with having a feedback session and should encourage each student to participate in all learning activities. Moreover, teachers should prepare 1-week feedback training for students before implementing the developed instructional model. On the other hand, we should accept that the traditional teaching method could benefit the students in the control group as well. However, we could see obviously that English argumentative writing ability of students in the experimental group became higher after treatment. They made considerable progress both in overall score and scores for each component of argumentative writing ability criteria. Students possibly get higher scores if they have more time and effort to practice writing with this developed instructional model.

## **Conclusion**

In this study, the researcher constructed the instructional model based on inquiry-based learning and 360 degree approaches to enhance English argumentative writing ability of undergraduate students. The results supported that this developed instructional model could promote English argumentative writing ability of undergraduate students. Although, the traditional instructional model could also help students improve their English argumentative writing ability, the mean scores in all components of English argumentative writing ability of students in the experimental group were higher than the control group students'. That means this instructional model is still useful to help students improve their learning. Students in the experimental group had higher mean scores after treatment, but English argumentative writing ability between the experimental group and control group showed no significant difference at the level of .05. Most of the students in the experimental group were moderately competent in using English according to their pretest. They had

no experience giving feedback, and they were not acquainted with learning by themselves. They were required to learn actively through each learning activity of this developed instructional model. Therefore, we could assume that these factors might be strong reasons to support why there was no difference between the effectiveness of the developed instructional model and the traditional instructional model.

### **Recommendations**

1. To implement this developed instructional model, teachers should be provided with students in the experimental group that comprise three English ability level groups (good-moderate-poor). In case most students' English ability level in class is moderate or poor, it tends to be difficult to achieve the learning outcomes since the overall learning activity of this instructional model aims to have the students construct their own knowledge through investigation, discussion, exchanging ideas, giving feedback and reflection. Thus, if the class does not consist of students who have several English ability levels, the students are less likely to get a lot of learning perspectives and useful information from sharing knowledge with other peers while learning.

2. The teachers should provide training for students about giving feedback before conducting the developed instructional model.

3. The teachers should study the instructional model carefully so that they can follow the teaching procedures correctly. However, the teachers can use other techniques to get the students' interest in learning by considering the appropriateness in accordance with the purposes of learning stages, learning outcomes, teaching procedures and content.

4. The teachers should prepare a one-week training course on basic grammar usage about paragraph writing for students to help them learn better during the experiment.

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