

The Development of Teaching English Minimal Pairs through Productivity-Based Instruction

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Abstract

The aim of this study is to develop teaching English minimal pairs through productivity-based Instruction in order to propose a teaching technique for the 21st century learning. The study was designed by using concurrent triangulation strategy which both quantitative and qualitative were conducted simultaneously. The research instruments consisted of satisfaction questionnaire, critical incident record and focus group interview. This study showed that using productivity-based Instruction can enhance students' group collaboration, and better understanding through the content given. Moreover, it helps students learn enthusiastically and actively because they put more effort on their product of learning.

Keywords: Teaching Minimal Pairs, Productivity-based Instruction, Teaching English Sounds

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บทคัดย่อ

การศึกษาค้นคว้าครั้งนี้มีวัตถุประสงค์เพื่อพัฒนาการสอนคู่เทียบเสียงภาษาอังกฤษโดยใช้การสอนเชิงผลิตภาพเพื่อนำเสนอเทคนิคการสอนสำหรับการเรียนรู้ในศตวรรษที่ 21 การศึกษานี้ออกแบบด้วยการใช้การวิจัยเชิงปริมาณและคุณภาพพร้อมตรวจสอบด้วยเทคนิคสามเส้า เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถามความพึงพอใจ แบบบันทึกเหตุการณ์สำคัญ และการอภิปรายกลุ่ม ผลการศึกษาแสดงให้เห็นว่าสอนเชิงผลิตภาพ สามารถเพิ่มการทำงานเป็นกลุ่มของนักศึกษาได้ และทำให้เข้าใจเนื้อหาได้ดีขึ้น ตลอดจนยังช่วยนักศึกษาเกิดการเรียนรู้ที่สนุกสนานและกระตือรือร้นเนื่องจากนักศึกษายกย่องสร้างผลผลิตจากการเรียนรู้ด้วยตนเอง

คำสำคัญ : การสอนคู่เทียบเสียง การสอนเชิงผลิตภาพ การสอนเสียงในภาษาอังกฤษ

Introduction and Statement of Problem

In the context of Ramkhamhaeng University, the Faculty of Education provides undergraduate degrees in education. English language teaching is one of them which has been operated by The Department of Curriculum and Instruction. This Bachelor's degree focuses on teacher training in English language teaching to supply them with Thai basic education. One of the crucial courses which focus on students' basic knowledge of linguistics is the course *Linguistics for Teachers* concerning the major fields of linguistics – phonetics, phonology, morphology, syntax, semantics, and sociolinguistics). This course includes the topic of sound acquisition for Thai second language (L2) learners of English. Minimal pair is commonly found in basic sound lesson. The basic knowledge of this course *Linguistics for Teachers* is the background knowledge of study in many courses of English major.

Based on the emergence of 21 century learning skills, Thailand Education 4.0 and child-centered learning, many teachers have to adjust, develop, and design newer or updated teaching techniques to reach the needs of the breakthrough and social changes in order to prepare the students' learning styles for a global citizenship by focusing on their learning output and outcome with effectiveness, and productivity.

Teaching sound is one of the basic teaching pronunciation lessons for Thai L2 learners of English. They will learn to produce the phonemes which are the smallest units of sound in language. If they can produce phonemes correctly, it will benefit them when pronouncing larger units – syllable and word. Starting from the smallest unit of teaching, it helps both Thai L2 students learn and acquire English pronunciation and also support the teachers to teach them effectively. This study is to investigate how the needs of current learning concepts, as mentioned about emergence of 21 century, can be developed based on the current teaching methods used in the classroom which are elaborately described in the

coursebook of CEN 4101 (Suthadarat: 2014A). Even though the study has started from a particular setting, the findings can be extrapolated and used in other educational institutes whose lessons provide teaching English sounds – those follow the similar curriculum and courses in English teacher training field. This is to say, there are two major groups of the teacher training students who can get the benefit from the teaching technique. First is the students who are learning to produce the problematic phonemes in English in order to improve their pronunciation. Second is the students and teachers who are involved in teaching English sound and pronunciation.

Research Objectives

1. To develop teaching minimal pairs through productivity-based instruction.
2. To investigate students' satisfaction and feedback of teaching minimal pairs through productivity-based instruction. The findings will be used to adjust the steps of teaching minimal pairs through productivity-based instruction.

Research Questions

1. How many percentages of each of students' satisfaction level are in teaching minimal pairs through productivity-based instruction?
2. How do students give feedback on teaching minimal pairs through productivity-based instruction?
3. How can the steps of teaching minimal pairs through productivity-based instruction be adjusted based on students' satisfaction and feedback?

Literature Review

Basically, teaching English language involve in four areas of basic language skills: listening, speaking, reading, and writing. These four skills are known as the *macro skills*. On the other hand, there are 4 aspects of the *micro skills*, which are language proficiency, supporting them the learners to learn, such as vocabulary, pronunciation and spelling, grammar and structure, including their learning strategies (Aydoğan & Akbarov, 2014; Suthadarat, 2014). Sound recognition is the first crucial stage of second language learners to acquire the small unit of language which is called *phoneme*. Sound acquisition is important for English language students who need to learn and differentiate each of the sounds in the target language.

Using minimal pairs for teaching is one of the techniques of teaching sounds that teacher can teach the two different target sounds at the same time. The concept of teaching sound by using minimal pairs to L2 learners is to compare nonexistent sound in L2 to existent sound in their L1. Suthadarat (2014A) stated five steps of teaching minimal pairs in English language teaching: 1) introduction 2) identification 3) practice 4) generalization and 5) evaluation which can be explained as the following details.

1) Introduction refers to the step that imitates child language acquisition which language learners hear and get familiar with sounds in each word given. In this step, students are requested to hear the sound via teacher's uttering the target sound.

2) Identification is the step whereby the teacher asks students to identify which sound they hear from the teacher's utterance. In this step, students are still learning silently without pronouncing any sound; however, they must tell the sounds they hear.

3) Practice is step in which the teacher requests students to pronounce the sounds and words they have heard from the previous steps. This step, the students will repeat, and also respond to the activities such as repetition drill, say the word in phrases or sentences. These words are proposed by a teacher to check whether can pronounce the sounds correctly.

4) Generalization is the stage where students are able to analyze and synthesize the rule from the previous activities they have learned. This stage requires students to summarize the rule of the lesson based on their own notice and understanding. Moreover, the students are able to apply the summarized rule to use in other related cases when they encounter the same sounds in other different words.

5) Evaluation is as the final step of teaching minimal pairs. This step is to investigate students' comprehension of the lesson given. The students' recognition of the words given is checked by which can be both the seen word pairs from the previous step and unseen ones. In sum, this step is the step to investigate whether the students comprehend and are able to apply the lesson or not.

These are five steps of teaching minimal pairs. A teacher leads the class and facilitates students to learn target sounds given – the word pairs e.g., [s]-[z], [f]-[v], [t]-[θ]. Each word pair supplied to students is one from existent sound (in Thai, L1) and the other from nonexistent sound (in English, L2). Furthermore, each syllable or word internal positions - initial, medial, and final positions must be considered. If it is possible, a teacher should provide a variety of sound position in word pairs with students such as [s]-[z] in *sip-zip* (initial position),

loser-looser (medial position), and *ice-eyes* (final position)—there are three word position, initial medial and final (depending on the available position) together with five to six word pairs in each lesson. There are some minimal pairs which contrast by voicing; however, both sounds in each pair are nonexistent sound in L1. A Teacher still can teach a nonexistent sound, but easier to acquire before the more-difficult one. For example, [θ]-[ð] are both nonexistent in Thai language, a teacher is suggested to teach [t]-[θ] at first. Then, after the sound [θ] is acquired, a teacher can teach [θ]-[ð] because students had learned and produced [θ].

According to learner center, self-motivation, self-learning skills, and Thailand Education 4.0, productivity-based instruction (Sinlarat, 2016) was proposed as an alternative way to prepare and enhance 21st-century students to learn enthusiastically. The concept is to encourage 21st-century learners to learn and produce the product from the lessons they have learned. This signifies the productivity-based Learning require the collaborative learning from students whom are expected to achieve the 21st century learning skills pointed in Learning and Innovation Skills – 4Cs (P21 Partnership for 21st Century Learning, 2007). Productivity-based instruction focuses on products of learning, having a means to succeed, seeing the value and quality of the product which is produced from the lessons given.

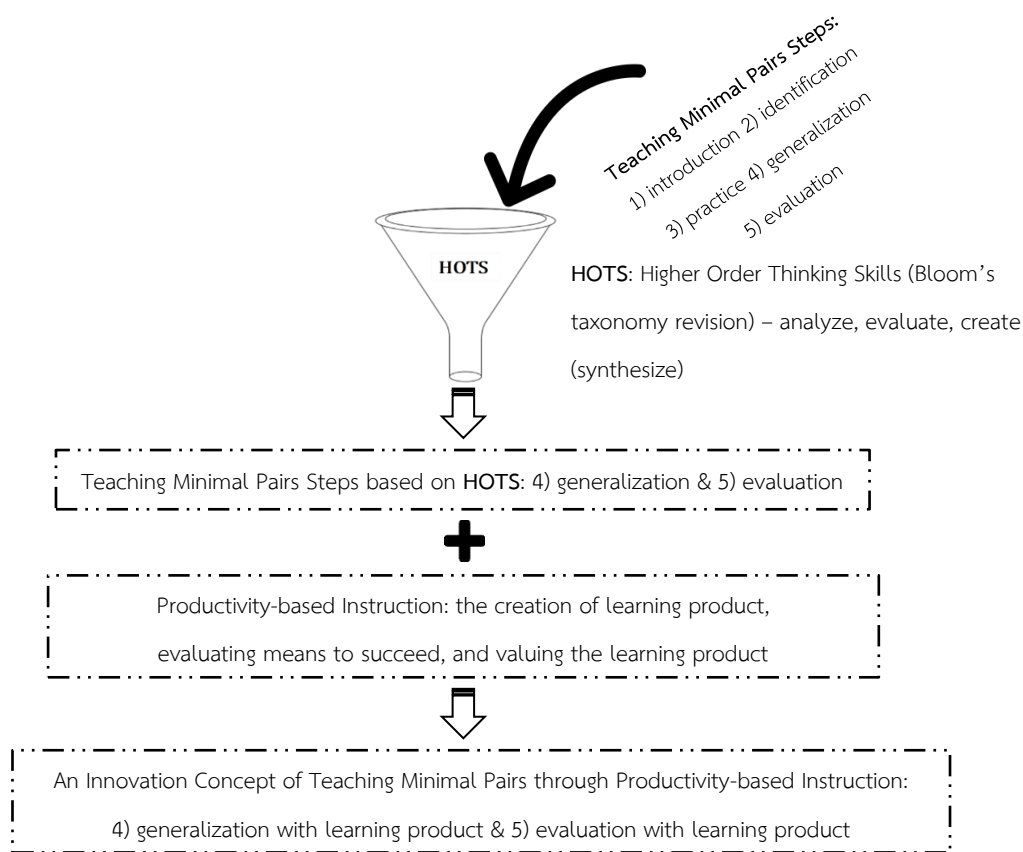
Sinlarat (2016) stated productivity-based Instruction in 4 aspects: 1) planning the goal 2) seeking means to obtain the product 3) experimenting/evaluating the product of learning and 4) adjusting and investigating the product of learning. These aspects go together with four productive skills needed: 1) observation 2) continuity of thinking 3) seeing ways for improvement 4) practicing skills, and 5) evaluation skills. It, therefore, can be concluded that productivity-based Learning is the way to encourage students of 21st century to learn actively, productively, and innovatively by producing the product reflecting their comprehension and creativity.

According to the revision of Bloom's Taxonomy (Anderson & Krathwohl, 2001), there are six domains: 1) remember 2) understand 3) apply 4) analyze 5) evaluate and 6) create. These five steps can reflect the nature of human' learning process. To compare the teaching minimal pairs, it can be identified that 1) introduction – remember and understand 2) identification – remember, understand, and apply 3) practice – understand, and apply 4) generalization – analyze and synthesize and 5) evaluation – analyze, synthesize, evaluate and create. To be connected this process to productivity-based instruction together with the revised version of Bloom's Taxonomy and develop teaching minimal pairs steps, there are two productive steps which can be merged. Hence, in order to encourage students learning

productively, a teacher can apply productivity-based instruction to the second last steps – generalization and evaluation.

In Picture 1, a concept of teaching minimal pairs through productivity-based Instruction that is used as a conceptual framework in this study was proposed. Firstly, Higher Order Thinking Skills (HOTS) worked as a funnel to refine the steps of teaching requiring students' analytical, synthesized, evaluative, and creative skills. Generalization and evaluation steps were selected as they corresponded to HOTS. Next, productivity-based instruction was merged in these two steps as a means for delivering a productive lesson concerning a learning product, in terms of student's learning output. That is, students have to reflect their learning result by creating some products to illustrate their learning effectiveness.

Moreover, in Picture 1, a concept of teaching minimal pairs through productivity-based Instruction that is used as a conceptual framework in this study was invented. Firstly, Higher Order Thinking Skills (HOTS) worked as a funnel to refine the steps of teaching requiring students' analytical, synthesized, evaluative, and creative skills. Generalization and evaluation steps were selected as they corresponded to HOTS. Next, productivity-based Instruction was merged in these two steps as a means for delivering a productive lesson concerning a learning product or student's learning output. That is, students have to reflect their learning result by creating some products to reflect their learning effectiveness.



Picture 1: The Framework of a concept of teaching minimal pairs through productivity-based Instruction

Methodology and Research Design

This study is an action research using mixed methods based on triangulation with quantitative method and qualitative methods. The quantitative was twice conducted by questionnaire to investigate students' satisfaction rates towards teaching minimal pair technique through productivity-based Instruction. The quantitative method was also twice conducted by critical incident technique (written task) and focus group interview (oral task).

The research design is a concurrent triangulation strategy which both quantitative and qualitative methods were conducted simultaneously with two cycles. The obtained data of each strategy was used to compare, support, or rebut each other. The consensus of obtained data were selected and grouped as the findings in this study. If some discrepancy of the finding are found, it will be analyzed based on the data given or collected in the second cycle of study.

To illustrate the research procedures, the first cycle of data collection was conducted by using questionnaire together with critical incident technique. Then the obtained data from the first cycle supplied the second cycle of this study. This purpose of the first cycle was to investigate the overall satisfaction and opinions from the participants. Then, the first-cycle findings were triangulated and used as the basis for the second cycle. The second circle was conducted by using the partial-adjusted questionnaire from the first cycle together with focus group interview to adjust the teaching minimal pair technique through productivity-based Instruction.

Participants

The participants of this study are the students enrolling in and attending the courses *CEN2103 Linguistics for Teachers* and *CEN 4101 Teaching Behavior in English 1* in the second semester of 2017, the Faculty of Education, Ramkhamhaeng University. They were an intact group with 44 and 35 students of the first and second cycle respectively. All of them participated in the class teaching minimal pairs through productivity-based Instruction. 44 and 35 students took part in a quantitative method which was conducted by questionnaire. The same group of 44 students contributed to a qualitative part by responding a critical incident record conducted by written paper. Then, five students volunteering their efforts to be the focus group in this study of the second circle.

Research Instruments

In this study, four selected lessons for teaching minimal pairs starting from [s]-[z], [f]-[v], [t]-[θ], and [s]-[ʃ] were performed as a research treatment. Research instruments for the first cycle are composed of three types which are served both quantitative and qualitative methods. Four selected lessons as mentioned are given (as a treatment) based on five steps of teaching minimal pairs existing in CEN 4101 course book, questionnaires (for quantitative method), and critical incident record and a focus group (for qualitative method). There are three parts in the questionnaires, verified by three experts, of this study as follows.

Part 1: Participant's general information

Part 2: Satisfaction rates of productivity-based instruction (5-point Likert scale)

- 1) Activities, teaching and learning technique
- 2) Instructional materials and learning resources
- 3) Instructional and learning Innovation

4) Overall satisfaction

Part 3: Critical incident technique (written sheet of impressive and unimpressive situation) is used to record like and dislike situation with explanation and reasons in the first QUAL cycle. For the second cycle, this part was changed into a focus group with semi-structured interview.

The same questionnaire was used to investigate students' satisfaction in teaching minimal pairs through productivity-based Instruction for both cycles. A critical incident record employed the first cycle of qualitative part to collect the data of impressive and unimpressive situations from the classroom teaching while the participants were experiencing the process of learning. They had to reflect as they were a teacher who could use these teaching methods; and had to verify their satisfaction rates. In the second cycle, five students had voluntarily contributed themselves to produce the product of learning, and critiqued instructional and learning processes of teaching minimal pairs through productivity-based Instruction. These three research instruments were triangulated each other to support or contrast the findings revealed from each cycle.

Data Collection Procedures

The first cycle of data collection procedures

The data collection procedures in the first cycle were conducted by following steps.

1) The researcher informed the intact group that today was to conduct some research processes during the class. The researcher gave the brief of research purposes, but not all in order to prevent the Hawthorne effect that students would exaggeratedly perform the target activities.

2) The class activity had been started by the researcher teaching five minimal pairs of sound of four selected lessons; for example, [s]-[z] namely, sip-zip, sink-zinc, loser-looser, bus-buzz, ice-eyes. The steps 1 to 3, introduction identification and practice, were performed by a researcher.

3) The students were asked to do group activities to collaborate, discuss, and perform on producing their learning product within 10 minutes. They, however, could not finish within 10 minutes. Finally, they had spent about 20-25 minutes in the first three weeks and 20 in the fourth week.

4) Each group was asked to present their learning product in front of the class to respond the steps 4 to 5, generalization and evaluation based on their own design and understanding. Each group spent approximately seven to ten minutes for the presentation. There were about six to seven members in each group; there were seven groups on those day.

5) Lastly, the researcher wrapped up and summarized the lesson based on each group presentation.

6) The students were requested to respond to the questionnaire and record the critical incident situation by writing on the questionnaire to inform which parts of teaching they were impressive and unimpressive. Overall, they had spent 15 minutes to complete both tasks.

After the findings from the first cycle were revealed, the researcher brought the findings back to the participants. Then, the 1st-cycle findings was used a basis assumption to adjust and develop the second cycle of data collection procedures.

The second cycle of data collection procedures

The data collection procedures in the second cycle were conducted by following steps.

1) The researcher asked for the volunteer who wanted to contribute themselves into the second cycle. This cycle required more effort from the participants i.e., spending time for group work, task, and class presentation.

2) The researcher conducted teaching step 1 to 3, which were the same as in the first cycle.

3) The group was assigned to work by themselves with the researcher's consult; however, the group's discussion was used as the final agreement on the product given – not the teacher's advice.

4) The students had taken a week for producing their product from the lessons they have learned with one's particular role in a group. The product could be any kind of task they wanted to produce. In this study, they produced a large pop-up book (12.5 x 19.5 inches) to collect a variety of six minimal pairs with 4-color pop-up pictures used to present to the whole class as their learning product.

5) Having finished their own product, the group presented their work in front of the class in both course CEN 2103 and CEN 4101. The class was requested to do the questionnaire.

6) A day after, the group had contributed themselves to the data collection which was conducted by a focus group interview.

7) Finally, the researcher gathered the data from all research instruments in order to finalize the research findings by using triangulation technique. The obtained data from three different research instruments – questionnaire, critical incident record, and focus group interview- were combined with triangulation technique. That is, all data were used to reflect each other shown in the next topic.

Data Analysis and Findings

The data was analyzed based on each research instruments. Then the triangulation of each finding will be weighed to arrive at the congruence of findings.

1) The data from the questionnaire are based on 5-point Likert Scale to investigate the participants' satisfaction rates towards the lesson given in the class. Table 1 is to show the result calculated by using statistical software. The data are shown as mean, standard deviation (SD), and interpreted in level of satisfaction from the lowest to the highest level. Table 1 is to show the satisfaction rates of each cycle. However, the results of each cycle are not shown for statistical comparison.

Dimensions and Topics	Mean	SD	Meaning
	Cycle 1	Cycle 1	Cycle 1
	Cycle 2	Cycle 2	Cycle 2
1. Activities, teaching and learning technique			
1.1 Class activities motivate more attention on lesson given.	4.52	.50	Highest
	4.21	.75	Highest
1.2 Class duration of teaching and learning is appropriate.	4.02	.69	High
	4.26	.61	Highest
1.3 Class activities promote learning creatively and productively.	4.48	.54	Highest
	4.46	.65	Highest
1.4 Activities and collaboration in the class can promote students' abilities to create learning product productively.	4.32	.80	Highest
	4.43	.69	Highest
2. Instructional materials and learning resources			
2.1 Learning resources enhance more lesson comprehension.	4.27	.75	Highest
	4.49	.65	Highest
2.2 Learning resources promote the understanding to the instructional scaffolding for teachers.	4.36	.57	Highest
	4.60	.55	Highest
2.3 Group or individual presentation enhance the application to design an instructional material for other lessons.	4.32	.63	Highest
	4.49	.81	Highest

Dimensions and Topics	Mean	SD	Meaning
	Cycle 1 Cycle 2	Cycle 1 Cycle 2	Cycle 1 Cycle 2
2.4 Materials presented by class enhance creativity to produce further instructional materials.	4.23 4.40	.67 .73	Highest Highest
3. Instructional and learning innovation			
3.1 Instructional and learning activities are new.	4.18 3.83	.81 .74	High High
3.2 Instructional and learning activities extent the new instructional design.	4.30 4.23	.73 .73	Highest Highest
3.3 Material produced by classmates better promote the concept to design newer instructional materials.	4.18 4.37	.69 .73	High Highest
3.4 Material produced by classmates better promote the concept to design newer instructional and learning activities.	4.25 4.20	.65 .75	Highest Highest
3.5 Gaining new experience which are useful for English language teaching.	4.63 4.37	.48 .69	Highest Highest
4. Overall satisfaction of instruction and learning			
	4.44 4.37	.59 .69	Highest Highest

Table 1: The students' satisfaction rates of teaching minimal pairs through productivity-based Instruction

There are four dimensions with 14 topics rated by participants in this study. All items were used to validate students' satisfaction rates regarding the lessons given in the classroom. The results are shown in Table 1. The result can be described as the following statements.

For the first cycle, the satisfaction rates were used as a basis assumption to respond to how the participants reflected on the teaching technique provided. The first dimension: Activities, teaching and learning technique were divided into four topics. The results showed that class duration of teaching and learning received the lowest mean of 4.02 (SD = .69), but still high. That is, there is one topic which can improve students' satisfaction towards the lesson and activities given. The second dimension: Instructional materials and learning resources were questioned based on four topics. The results of this dimension reflected that students were satisfied with the instructional materials and learning resources of the lesson with the highest satisfaction rate of all topics. The third dimension: Instructional and learning innovation, the participants rated two topics with the same mean of 4.18. First, material produced by classmates better promoted the concept to design of newer instructional materials with SD of 0.69. Then, instructional and learning activities are new with SD of 0.81. That is, there are two topics which can be improved the satisfaction rates. The fourth

dimension conveyed the overall satisfaction of instruction and learning with a mean of 4.44 (SD = 0.59) classified as a highest satisfaction rate.

As can be seen in cycle 2 of the first dimension, 1.1 and 1.3 were lower, but still in high rate. This might be because in cycle 2 the students repeated the lessons as they did in cycle 1, but they were allowed to spend more time on the productive-based learning in step 4 and 5. Especially, in the third dimension 3.1, 3.2, 3.4 and 3.5, the resemble tasks given, even more time, were not new for them. However, the learning product, the pop-up book, could call for more attention as can be seen in 3.3. That is to say, they were already familiar with cycle 1. Hence, some satisfaction rates could be undeniably lower. Yet, the satisfied rates of each cycle and the overall satisfaction rate were still in a high rank and acceptable, since the purpose of this research is to find out ways to improve teaching steps to productivity-based instruction.

2) The data from the record of critical incident situation (qualitative method) were divided into two major categories – impressive and unimpressive situation. Each major category shares the same subcategories: topics of the events, causes, and effects. The findings showed as the following details.

2.1) Impressive situation can be classified into three groups: 2.1.1) class collaboration as shown in Table 2, 2.1.2) classroom management as shown in Table 3, and 2.1.3) Content and Activities from the lesson given as shown in Table 4.

Topics	Causes	Effects
- Brain storming - Class presentation and collaboration - Learning productively (innovation of learning based on activities given)	- Sharing ideas to group and class - Sharing an individual idea to group - Listen to (each) other opinions	- Motivating attention - Help memorizing and recognizing what they have learned - Learning new instructional technique

Table 2: Impressive situation of class collaboration (2.1.1)

Topics	Cause	Effects
- The attentiveness of the teacher to the class - The teacher encourage students to present their own learning product	The teacher individually participate in each group while the task given.	Gaining more class participation and communication (which lacks and contrasts the nature of this big class of this university)

Table 3: Impressive situation of classroom management (2.1.2)

Topics	Cause	Effects
• The teacher pronounces the sounds and words clearly (teacher's performance). • Understand the lesson more • Pronunciation practice	• Focusing on 'Practice' stage (While-pronouncing process) • Doing activities together with learning simultaneously.	• Practicing more effectively, and productively • Learning English sounds through minimal pairs • Seeing clearer examples

Table 4: Impressive situation of content and Activities from the lesson given (2.1.3)

2.2) Unimpressive situation can be classified into two groups: 2.2.1) group collaboration as shown in Table 5, and 2.2.2) classroom management as shown in Table 6.

Topic	Causes	Effect
• Some classmate did not collaborate	• Embarrassment of making mistake • Laziness	• Insufficient group collaboration

Table 5: Unimpressive situation of class collaboration (2.2.1)

Topics	Cause	Effects
• Insufficient time for group activities	• Short period of time (25 minutes did not seem enough for the productive-based activity)	• Unable to perform with the expectation and the best performance they can do.

Table 6: Unimpressive situation of classroom management (2.2.2)

According to Table 5, it was found that some students did not put an effort on the lessons since they felt too to be responsible for group work while they were working with many people. This could be because of their laziness or shyness to work in group of new friends. The researcher solves the problem by adapting the role-play cards from Gallery Walk activity (SERC Pedagogic Service Project, 2011). And also, in Table 6, time limitation was the other constraint on their productivity-based learning. So, the researcher had to extend the working duration about 10-15 minutes and lastly allow them to work on their learning product out of classroom which will be mentioned later in 3.2).

3) Based on the findings from research instruments, the findings obtained from the first cycle can be categorized into two groups: 3.1) positive feedback and 3.2) negative feedback.

3.1) Positive feedback: the participants were impressed with the process of collaboration in productivity-based instruction. They saw the importance of producing the learning product based on the lessons given. The lessons helped them better understand about learning productively. Furthermore, they confirmed this learning by doing with producing their own product assisted them to retain the knowledge through a rich and direct experience. That is, they were motivated and encouraged to learning actively with participation to the classmates which are rare in the nature of this university because of the big class size. Moreover, they felt enthusiastic to learn since the lesson and activity challenge both their learning opportunity and academic improvement.

“The teacher is the role model who concerns with a good pronunciation for non-native speakers, especially Thai L2 learners. I realized that we had more time to work together which is very rare in our university. We get closer and learn how to collaborate each other.”

Participant 1 (from focus group interview)

“While we were working on our project, we have more responsibilities to achieve individuals’ tasks I mean we learn how to be a good teamwork and present our ideas to others”.

Participant 2 (from focus group interview)

“On the presentation day, we got very good feedback from the class. They responded to our presentation and paid great attention to us. I knew we were so proud of ourselves and we could see they were impressed with our learning product”

Participant 3 (from focus group interview)

“The examples from you (the teacher) reminded us to go through the right direction while working on our learning product (P4). We had a new experience (P5). It isn’t totally new, but very impressive and innovative for us to learn with productivity-based instruction (P4) which we will adapt to our future students when we are teachers (P4 and P5). We also know how we can adapt productivity-based instruction to other lessons for them. Yes..... Certainly (P1-P5).”

Participant 4 and 5 (from focus group interview)

3.2) Negative feedback can be illustrated as follows. The time limitation was the main obstacle of learning progress since it was the first time to experience Productivity-based instruction. So, they need more time to get used to doing the learning product. Classmates (in group work) caused the disadvantages of learning because some did not contribute to the group. They just stayed quiet without any response. Possible reasons include: insufficient

knowledge, unfamiliarity with group members, embarrassment or avoidance of losing face from mistakes, as well as laziness.

Next, moving to the second cycle, the obtained data found in the previous cycle was used as a basis assumption together with the adjustment and improvement in order to develop teaching minimal pairs thought productivity-based Instruction.

The positive feedback of teaching minimal pairs through productivity-based Instruction from this preliminary finding showed that the participants were motivated by productivity-based instruction with the focuses on: 1) class collaboration with learning productively, 2) teacher's performance as a role model, and 3) content in terms of academic knowledge and practice. In addition, students were more confident and impressed when they were presenting their learning products to the class; and gained some feedback from the class and instructor.

The negative feedback of teaching minimal pairs thought productivity-based Instruction from the first-cycle findings were time limitation of producing group's product and a lack of group collaboration from some members. Time limitation can be solved by giving the task as an out-of-class assignment, then return to present during the next week. Moreover, a lack of group collaboration can be reduced by adopting 'Gallery Walk'. Gallery walk focuses on students' cooperative learning skills. Students will be assigned and explained the roles of each group member playing their responsibilities of different group members. They consist of five roles in a group as follows (SERC Pedagogic Service Project, 2011): 1) Leader - keeps the group on task, encourages participation, keeps conversation civil, and assures that all group members understand key points. 2) Recorder - writes group responses on poster sheets and prepares the written report out. 3) Reporter - presents the group's thoughts on a question to the class. 4) Monitor - makes sure that responses are made at the top of poster sheets so there is room for the next group. Acts as timekeeper for timed activities. and 5) Wildcard (in groups of five) - acts as an assistant to any member that needs help. If the activity spans more than one class period than this person can take the role of any member that is absent.

After being assigned the task for the second cycle, the participants worked in their own group for a week, together with the instructor's assistant. After a week, they presented their learning product to the class. The questionnaire was used to check the satisfaction rates. It found that the participants were satisfied with the teaching minimal pairs through productivity-based learning and instruction from the instructor and the contributive group. It confirmed that learning through productivity-based instruction with the adjusted last two steps

of teaching minimal pairs can improve students' learning language (through task) and their teaching skills (through class presentation). The participants reflected that giving them more time and specific roles in a group helped them improve group dynamic, collaboration and contribution affecting the learning product.

"Those days, we discussed after the presentation. We found that we presented too many minimal pairs at once, so we could not focus much. That was what you (the teacher) asked us for more focus on each pair, since there were two to three positions of each pairs that we could present to the class. We were confused about what to do next, especially while we were excited. However, our teamwork helped us pass through.

Participant 1 (from focus group interview)

"After we had more time to work on our work I mean the learning product I think we did better than working in the class. And group work encouraged us to learn productively and effectively. Even though we were nervous on the presentation day, we could control it and it worked we truly worked on it by ourselves in every step. So, we knew how we could present it, even if we were anxious sometime..

Participant 2 (from focus group interview)

The findings from the participants is congruent with what Sithsungnoen (2018) said about the 21st Century skills helping students think, analyze, and do more research to get the information in order to support their learning. They were proud of their attempt to learn lessons and their learning product. This innovative instruction is useful for semester projects such as midterm or final project, since some kinds of learning products are larger and need more time to produce. So, teachers should realize that giving overloaded tasks to students can demotivate their learning ability. Anyway, it does not mean a product of learning must be large. It depends on how teachers design tasks.

This study reflects the notion of 'i+1' (Krashen, 1981) of second language acquisition (SLA). 'i' stands for the current level of proficiency of ESL student while '+1' is for the progress challenging students to learn with one level of difficulty. The 'i+1' is similar to the appropriate instructional level for teachers (Laslie & JoAnne, 2010) to teach the students. The 'i+1' points at the instructional level which is best for students to learn with challenge. Consequently, 'Flow Theory' (Csikszentmihalyi, 2010) can be applied to students' needs to encourage them to learn with their enthusiasm. It states the meeting point where the challenge meets skills – called 'Flow Channel'. This channel can help students learn the new or challenging lesson actively. It also supports as Iamsirak (2017) said that productivity-based Instruction helps

learners obtain the knowledge based on learning by doing productively which is congruent with the promotion of 21st Century learning skills. In addition, Preedeekul (2017: 238-239) emphasized that 21st Century students should be taught less and learn more; and teachers should provide them with authentic learning by using group dynamic and collaboration. Thereby, if a teacher can reach the mentioned areas – i+1, instructional level and Flow Channel – a teacher can encourage and motivate students to learn and produce their learning products effectively.

Last but not least, the findings in this study confirmed that zone of proximal development (ZPD) (Vygotsky, 1978) children (or learners) can learn the difficult lessons with the guidance and encouragement from knowledgeable person such as teachers, parents, and friends. While Wood, Bruner, & Ross (1976) previously defined scaffolding as a process that the children could learn the new tasks which were beyond their competence by obtaining the adult's assistant and support such as their parents (Freud, 1990). This relates to the concept of sociocultural learning regarding Roger (1990) guided participation process, (Scott & Palincsar, 2013) stating that working with others on various products helped learners adopt socially shared experiences and knowledge to their competency development. It confirmed that the participants in this study revealed to themselves that they could learn and understand more because they had a good teamwork, they shared experiences and knowledge through productivity-based learning. That means they can encourage the students or other learners such as their friends, senior students to learn in group and expand to a larger community.

Conclusion

English language teaching is an enjoyable and challenging job for teachers. We need to adjust ourselves and prepare our students to be a global citizen. Finding new techniques to teach and facilitate them to learn is one of our work progresses. Teaching English minimal pairs through productivity-based Instruction can be an example of teaching development combining the new technique to the traditional one. It help students learn enthusiastically and actively.

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