

The Effects of Using the Zone of Proximal Development (ZPD) on the Fundamental English Classes of Thai EFL Learners

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ABSTRACT: *This study aimed to gather information related to cooperative learning and corrective feedback to support the English teaching and learning based on the Zone of Proximal Development (ZPD) of grade 10-12 students in the academic years of 2023 at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University. The participants were 284 students who studied Fundamental English I, II, III, IV, V and VI. The instrument was the Google form questionnaire developed in terms of teaching and learning English. The results were interpreted, categorized, and tabulated on computer sheets. The findings revealed that cooperative learning helps student to socialize, enhances good working relationships, improve the attitude towards work, enhances class participation, and make students participate in activities. Additionally, based on the corrective feedback, students valued teachers who asked questions to ensure understanding, motivated to persevere through difficult tasks, provided multiple explanations, respected students' ideas, and encouraged to learn from their mistakes.*

KEYWORDS: zone proximal development (ZPD), cooperative learning, corrective feedback

INTRODUCTION

One of the most used terms in the field of education is probably the Zone of Proximal Development (ZPD). The ZPD was a key construct in Vygotsky's theory of learning and development

(Vygotsky, 1978) since Vygotsky defined the ZPD as: “The distance between the actual developmental level (of the learner) as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers” (Vygotsky, 1978).

Related to classroom teaching, Vygotsky’s concepts brought revolution in the field of learning, especially combining thought and language with socialization. ZPD at early stages pushes the children to go beyond their phase of learning, to step into what they are capable of learning with scaffolding.

The concept of zone of proximal development (ZPD) described the current or actual level of development of the learner and the next level attainable using environmental tools and capable adult or peer facilitation. The idea is that individuals learn best when working together with others during collaboration, and it is through such collaborative endeavors with more skilled persons that learners learn and internalize new concepts, psychological tools, and skills. Roosevelt (2008) holds that the main goal of education from Vygotskian perspective is to keep learners in their own ZPDs as often as possible by giving them interesting and culturally meaningful learning and problem-solving tasks that are slightly more difficult than what they do alone, such that they will need to work together either with another, more competent peer or with a teacher or adult to finish the task.

The idea is that after completing the task jointly, the learner will be able to complete the same task individually next time, and through that process, the learner’s ZPD for that task will have been raised. This process is then repeated at the higher level of task difficulty that the learner’s new ZPD requires (Campbell, 2008).

In the case of English Language Teaching (ELT), teachers are responsible for providing students appropriate learning experiences and supporting to help students realize their potential development. The goal of instruction is to foster our students’ ability to engage in activities that enable them to apply and modify what they have learned to new situations.

Collaboration is an essential element of productive work in the ZPD. With learning taking place in the ZPD, the area beyond a students’ level of independent skill or knowledge, Vygotsky realized that we learn through our interaction with others. When students perform in their ZPD for a given task, they are apprenticing and unable to engage in the task on their own. They need appropriate guidance, modeling, and assistance, all of which are provided through collaboration with peers or teachers. Therefore, learning is a social process that can be facilitated through numerous interactions and is not limited solely to expert-novice interactions, creates limitless possibilities as we think about how we can best support English Language Learners (ELLs) or Multilingual Learners (MLLs) in our classrooms through interactions with peers and teachers.

Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University, Bangkok which is an autonomous institution directly under the central administration of Phranakhon Rajabhat University was founded in 1953 with the primary goal of being as a laboratory for student teachers and providing the educational scheme for high school levels. The school offers an educational program that promotes a high standard of learning achievement from grade 7-12. There are four majors for senior high school students which are 1) Mathematics-Science, 2) Mathematics-English, 3) English-Japanese and 4) English-Chinese.

The researchers are responsible for teaching fundamental English I-VI for grade 10-12 students emphasizing on how to promote the English proficiency in the classroom by doing various English tests or exercises. In the classroom, students will learn English grammar points or English structures or English knowledge which were clarified based on the O-NET test, GAT-PAT, TOEIC, IELTS, TOEFL, etc. The English topics could be grouped into six parts as follows: 1) Situations/Dialogues, 2) Error identification, 3) Writing Ability (Grammar Structure), 4) Vocabulary, 5) Reading Comprehension, and 6) Sentence Completion

Teaching English is an important issue in Thailand because learning second language is difficult for L2 learners since they cannot use English in real life situations. Therefore, teachers should always improve their strategies to promote the teaching English language (Nunan, 2011). The research applied the Zone of Proximal Development (ZPD) in teaching English for grade 10-12 students because the ZPD has been considered useful for students in second language acquisition in that this method mastery of the grammatical rules and vocabulary knowledge are emphasized. Therefore, for English teaching and learning to be effective, instruction should focus on skills and knowledge that are attainable for students. It has been hoped that the ZPD will promote students' English proficiency in getting a better score in English tests and communicating accurately, meaningfully, and appropriately.

In addition, according to the different characteristics of students, their learning and achievement can be affected by diversity issues such as culture, language, learning style, and personality. Because diversity influences student behavior, educators need to consider instructional strategies that meet diverse characteristics of students (Coulthard, 2011). The Zone of Proximal Development (ZPD) is one of the systems which consider individual differences and needs of students in teaching process, and offer instructional approaches appropriate to differences of students.

In summary, English language is a global language. Learning English improves the individual's status and opportunities in education, technology, global trades, and business. Moreover, English plays an important role like a channel of communication (Kannan, 2009). Many research studies have been conducted in different areas of learning while considering Vygotsky's notions. However, there are stills rooms for investigating the degree the ZPD can affect learning different

language components and skills. It has become clear that many students face problems in learning. What has been taken as the main concern in this research is to see teaching within the frameworks of the ZPD can enhance students' learning. Consequently, the results from the study can be implications for the English teachers who need to improve their students' English proficiency and for the educational institutions to design the effective teaching skills for senior high school students.

Objectives of the Study

To gather information related to cooperative learning and corrective feedback to support the English teaching and learning based on the Zone of Proximal Development (ZPD).

LITERATURE REVIEW

Zone of Proximal Development

The Zone of Proximal Development (ZPD) is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky,1978). As this definition was created with child development in mind, it includes "adult guidance". Vygotsky also allowed that more capable peers may provide the nudge of assistance in the ZPD that showed a child's potential.

The ZPD is believed to point out the difference between the child's capacity to solve problems on his own, and his capacity to solve them along with receiving assistance (Schutz, 2004). The notion of the ZPD clearly reflects Vygotsky's view on the nature of human development and interrelation between learning and development. Learning, which is distinct from development, may lead to development and ZPD is the abstraction that describes the mechanism and potential effect of learning on development.

Wertsch and Stone (1985) believe that research on teaching has been stimulated in the past few years by some seminal concepts from recently translated works of Vygotsky. His thoughts affect our understanding of learning and teaching. Vygotsky's insights have also affected our understanding of teaching. In his theory, what a learner can learn without the help of others can be considered as developmental level. Assisted versus unassisted performance is distinguishing point so that teaching must be redefined as assisted performance and teaching occurs when performance is achieved with assistance through a child's ZPD.

The Zone of Proximal Development (ZPD) perhaps is the best-known concept of Vygotskian socio-cultural psychology. Initially, it was elaborated for psychological testing in schools (Vygotsky, 1962). Vygotsky stated that testing should be based not only on the current level of a

child's achievements but also on the child's potential development. The actual level of development (level of independent performance) does not sufficiently describe development. Thus, the zone of proximal development is the distance between what a person can do with and without help. The term proximal indicates that the assistance provided goes just slightly beyond the learner's current competence complementing and building on their existing abilities (Cole and Cole, 2001).

Vygotsky's definition of the ZPD was designed to consider the developmental potential of children. However, in the L2 learning context, many learners are adults. Prompted by this fact as well as the finding that adult peers need not necessarily be more capable to aid in the ZPD, Vygotsky's definition has been adapted to better suit the adult L2 developmental context (Ohta, 2005). The adapted definition states that the ZPD is the distance between the actual developmental level as determined by individual linguistic production, and the level of potential development as determined through language produced collaboratively with a teacher or peer.

According to Vygotsky, one of the key factors for success is the role of the teacher or of more experienced peers. They take the crucial role to provide the guidance, advice, and artifices to the child to motivate his or her learning to internalize and function at the highest potential level. It also was pointed out that the instruction could not happen in isolation, but it will occur in the joint interaction between the child and more knowledgeable or advanced people. During the interacting, the more experienced person will support new concepts or knowledge being added to the previous understanding and help children to realize concepts by themselves.

Cooperative Learning

Among the popular approaches towards learning language components are those which manifest learning by collaboration and interaction. As Dillenbourg (1999) discussed, collaborative learning is not one single mechanism. Olsen and Kagan (as cited in Richards & Rodgers, 2001) believe that cooperative learning is an approach to teaching that makes maximum use of cooperative activities involving pairs and small groups of learners in the classroom. Cooperative learning is group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others.

Because in the realm of collaborative situation learners and teacher interact with each other, it can be said that a kind of social interaction is performed. Dillenbourg (1999) emphasizes that collaborative learning describes a situation in which forms of interaction among people are expected to occur, which would trigger learning mechanisms, but there is no guarantee that the expected interactions will occur. In this way, creating a chance to develop different kinds of interactions can help peers to perform the tasks.

Concerning the profits of collaborative learning and effects of group working in the learning context, Widdowson (1990) asserts that cooperative learning is one of the best researched of all teaching strategies. There are some definite methods which show that teachers and students are more successful in groups because they have the opportunities of collaborative work in which the students can learn better and faster, and they can feel that they are an important member in the group that help develop the processes of learning and teaching. So, when they have a positive view towards the learning process, they will learn more efficiently. Of course, it is not true that just making a group and assigning a project that learners should do can necessarily end in success. Nevertheless, the teacher should be aware of the essential methods of cooperative learning and social interactions among the peers.

Cooperative learning is a general term for different small group interactive instructional processes. Students work together on academic tasks in small groups to help themselves and their partners learn together. Students are responsible for their learning, and they perform the task of learning as if they need each other. So, the learners can learn better and deeper in groups with positive interactions than doing the tasks alone.

Mayer (2003) declares that to teach, begin with a familiar, concrete example and help students relate the information to personal experiences, then explicitly state how and why material will be useful and use personalized speech. Helping students feel confident that they can master the material can be the next important item affecting on motivation development. As a matter of fact, tasks are not something to do together as a team but to learn together as a team.

Collaborative learning happens when students work in pairs or groups. Students and teachers negotiate the rules that govern them. They discuss what are to be taught and how they should be taught. Descriptions of classroom interaction focused initially on the language used by the teacher, especially teacher questions and the learner responses. An important feature is how a teacher can create the interaction opportunities in learning context. Fortenberry (1998) considers that collaborative learning skills are designed to maximize four attributes among students, which are positive interdependence, individual accountability, equal participation, and simultaneous interaction.

In second language teaching, Cooperative Language Learning has been embraced as a way of promoting communicative interaction in the classroom and is seen as an extension of the principles of Communicative Language Teaching. Learner-centered approach has more advantages over a teacher-centered because it helps improve learner's motivation and decrease his stress of performing the task alone, and it provides the opportunity for communication strategies, social interactions and doing interactive tasks. Accordingly, through interactive group activities a variety of curricula can be applied.

Corrective Feedback

The Zone of Proximal Development (ZPD) emphasizes the distance between what a learner can learn by him/herself and what he/she can learn by assistance of teachers or peers. In this regards, two main concepts, i.e., problem solving and corrective feedback which have essential roles need to be elaborated. Scott (2008) supposes that corrective feedback helps learners in retrieval of the target language form rather than providing the correct form. He holds that “Language learners will benefit from corrective feedback that makes them retrieve the target language form. The retrieval and subsequent production stimulate the development of connections in the learner’s memory. Error feedback can be effective, but it must be sustained over a period, and it must be focused on something which learners are capable of learning. Instruction then draws learner’s attention to language features and permits them to develop knowledge of those features if they are developmentally ready to do so. The rate a teacher must give corrective feedback to her students is usually a good indication of what current stage of interlanguage the students are on”.

Regarding deep changes of researchers' attitudes toward corrective feedback for a long time, it is necessary to have some pieces of information about the principles of corrective feedback and its meaning. Gass (1997) affirms that corrective feedback is referred to as any behavior of supplying an appropriate item in response to what is perceived and interpreted to be an error committed by students. It seems to be a current tendency that many teachers and researchers treat producing incorrect forms as a positive phenomenon in which learners are trying to form and test their interlanguage systems. In this respect, whatever reactions teachers will make to learners’ errors are considered a crucial aspect of language teaching, recognizing that making errors is the representative of the learning processes.

As to feedbacks provided by teachers or supervisors Scheeler, Ruhl, and MacAfee (2004) hold that “Teachers should insist on receiving feedback for improving the new teaching methods they might try to apply in their classrooms. They also talk about the different forms’ feedbacks may take. Teachers who attempt to try new teaching methods must receive regular feedback about the impact of new practices on student learning. To provide effective feedback to teachers, supervisors and others involved in teacher preparation must first know the attributes of effective feedback. However, feedback may take many forms, may be delivered in many ways at different parts of the learning process, and by different individuals. The nature of the behavior that is the focus of the feedback may also impact feedback effectiveness”.

Some of the researchers concern the error in learning context as a precious matter by which students are helped to learn the points more carefully and learning in this kind of process hardly will be forgotten. Feedback can help the L2 learners learn the subject matters deeply. The usefulness of corrective feedback is highly dependent upon the nature of the transaction and mediation provided by the expert in this procedure. Nassaji and Swain (1997) suppose that within the Vygotskian sociocultural perspective and drawing the Vygotskian notion of the ZPD,

corrective feedback can result in better and deeper learning. Error correction is considered as a social activity involving joint participation and meaningful transaction between the learners and the teachers.

METHODOLOGY

The Participants

This study was aimed to report on research conducted at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University, Thailand. Focusing on English teaching and learning based on the Zone of Proximal Development (ZPD), the study was carried out to gather information related to cooperative learning and corrective feedback to support the teaching and learning by the Zone of Proximal Development (ZPD) in classrooms, considering its various students' learning perceptions.

The participants were 284 students who studied Fundamental English I, II, III, IV, V and VI. All participants were grade 10-12 students who studied in mathematics-science major, mathematics-English major, English-Japanese major, and English-Chinese major in academic year 2023.

Method of Data Collection

To collect the data of the study, the questionnaire developing to explore the grade 11-12 students' teaching and learning perceptions based on the Zone of Proximal Development (ZPD) in English subjects was applied. The questionnaire was developed in terms of teaching and learning English related to cooperative learning and corrective feedback. The questionnaire was distributed to the participants at the end of academic year of 2/2023. All participants gave the feedback by checking the items of the questionnaires via Google Form during their last periods in February 2024.

Instruments of Data Collection

The questionnaire via Google Form was particularly employed for getting the data towards students' learning perceptions of English teaching and learning based on the Zone of Proximal Development (ZPD). The purpose of the questionnaire of this study was to gather information related to cooperative learning and corrective feedback to support the teaching and learning by the Zone of Proximal Development (ZPD) in classrooms in English subjects. The questionnaire was developed based on the preliminary interviews with some English teachers who had ever applied the Zone of Proximal Development (ZPD) in their classrooms. The questionnaire was designed English and was distributed to the participants in terms of Google Form. The questionnaire was separated into two categories accounting for 32 items as follows:

- 1) The Cooperative learning consisted of 12 items, and
- 2) The Corrective Feedback consisted of 20 items.

Method of Data Analysis

The results and findings were presented in tables and figures together with full explanations. The results of the questionnaire were interpreted, categorized, and tabulated on computer sheets and were calculated into the statistical values as follows:

(a) The data concerning grade 12 students' learning perceptions of English teaching and learning based on the Zone of Proximal Development (ZPD) were presented in *Mean Range and Standard Deviation*.

(b) A five-point Likert scale (Likert, 1932) was used to score the levels of the satisfaction of students' opinions. It is a scale used in questionnaire to specify the level of agreement or disagreement:

Scale	Perceptions	Mean Range
5	Excellent	4.50 - 5.00
4	Good	3.50 - 4.49
3	Fair	2.50 - 3.49
2	Poor	1.50 - 2.49
1	Very Poor	1.00 - 1.49

(c) *Mean* was used to interpret the average level of learning perceptions towards the satisfaction of students' opinions. The higher mean score of each activity indicates higher satisfaction. On the other hand, the lower mean score indicates less satisfaction.

FINDINGS

This part presents the data collected from grade 10-12 students obtaining Science-mathematics majors, Mathematics-English major, English-Chinese major, and English-Japanese major at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University in academic year 2023. The results were based on the data obtained by using the questionnaire (Google Form). The results from the questionnaire (Google Form) were presented in two parts as follows: 1) Cooperative learning and 2) Corrective Feedback.

Cooperative Learning

This part was conducted to find out the top 5 criteria in cooperative learning. The results were summarized and presented in the figure as follows:

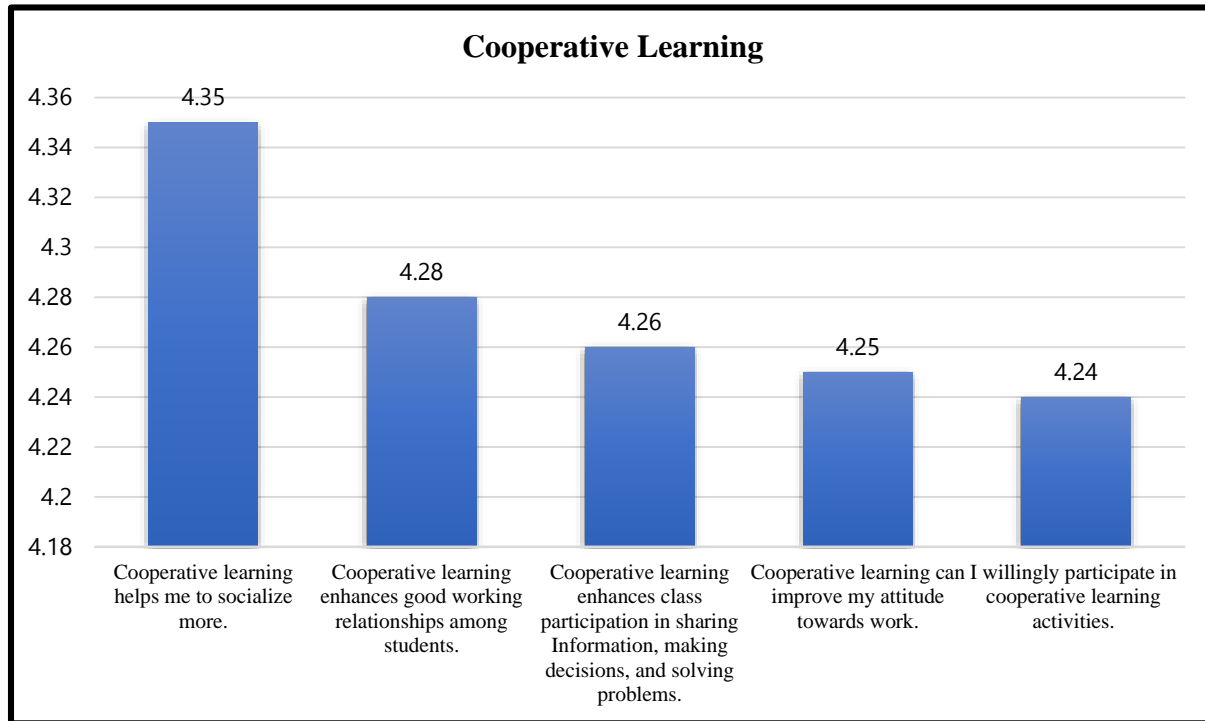


Figure 1 Top 5 Criteria in Cooperative Learning

The top 5 criteria in Cooperative Learning, based on their mean scores, were "Cooperative learning helps me to socialize more" ($\bar{x} = 4.35$), "Cooperative learning enhances good working relationships among students" ($\bar{x} = 4.28$), "Cooperative learning can improve my attitude towards work" ($\bar{x} = 4.25$), "Cooperative learning enhances class participation in sharing information, making decisions, and solving problems" ($\bar{x} = 4.26$), and "I willingly participate in cooperative learning activities" ($\bar{x} = 4.24$). These results indicated that students generally had positive attitudes towards cooperative learning, which might help them to engage more in class activities, develop better relationships with peers, and feel more motivated towards their work. Furthermore, the findings suggested that cooperative learning could facilitate socialization and promote active participation in the learning process, thus contributing to a more stimulating and enjoyable learning environment. Overall, these results highlighted the potential benefits of incorporating cooperative learning strategies in educational settings to enhance students' learning outcomes and social skills.

Moreover, this part explored the students' attitudes towards cooperative learning. The results based on the questionnaire data were shown as follows.

Table 1 Cooperative Learning

No.	Criteria	\bar{x}	S.D.	Mean Range
1.	When I work together, I achieve more than when I work alone.	4.21	0.84	Good
2.	I willingly participate in cooperative learning activities.	4.24	0.89	Good
3.	Cooperative learning can improve my attitude towards work.	4.25	0.84	Good
4.	Cooperative learning helps me to socialize more.	4.35	0.91	Good
5.	Cooperative learning enhances good working relationships among students.	4.28	0.93	Good
6.	Cooperative learning enhances class participation in sharing Information, making decisions, and solving problems.	4.26	0.8	Good
7.	Cooperative learning trains me how to be a good leader and a good follower.	4.21	0.84	Good
8.	Creativity is facilitated in the group setting.	4.16	0.88	Good
9.	Group activities make the learning experience easier.	4.07	0.96	Good
10.	I feel actively involved in all activities through a cooperative learning approach.	4.13	1.02	Good
11.	The lessons become more interesting with cooperative learning approach.	4.11	1.01	Good
12.	I feel intellectually challenged through cooperative learning approach.	4.10	1.02	Good
	Average	4.20	0.92	Good

Cooperative learning has been shown to have a positive impact on students' social and emotional well-being. This is reflected in the three criteria with the highest mean scores: "Cooperative learning helps me to socialize more," with a mean score of 4.35, "Cooperative learning enhances good working relationships among students," with a mean score of 4.28, and "Cooperative learning enhances class participation in sharing information, making decisions, and solving problems," with a mean score of 4.26. These results suggested that cooperative learning could promote a more collaborative and supportive learning environment, improving students' attitudes towards learning and enhancing their participation in class activities.

However, the results also suggested that cooperative learning might not always be effective in enhancing creativity or making the learning experience easier or more intellectually challenging. The three criteria with the lowest mean scores were: "Group activities make the learning experience easier," with a mean score of 4.07, "I feel intellectually challenged through cooperative

learning approach," with a mean score of 4.10, and "The lessons become more interesting with cooperative learning approach," with a mean score of 4.11. These results suggested that while cooperative learning might not always lead to an easier or more interesting learning experience, it could still have a positive impact on students' social and emotional well-being.

In conclusion, the results of this study suggested that cooperative learning can be an effective approach to improving students' social and emotional well-being, promoting a more collaborative and supportive learning environment, and enhancing their participation in class activities. Educators should consider these factors when deciding whether to incorporate cooperative learning activities into their classroom and should assess the effectiveness of these activities in achieving their intended goals. While cooperative learning might not always lead to greater creativity or an easier learning experience, it could still provide students with valuable opportunities for social interaction and collaboration.

Corrective Feedback

This part was conducted to find out the top 5 criteria in corrective feedback. The results were summarized and presented in the figure as follows:

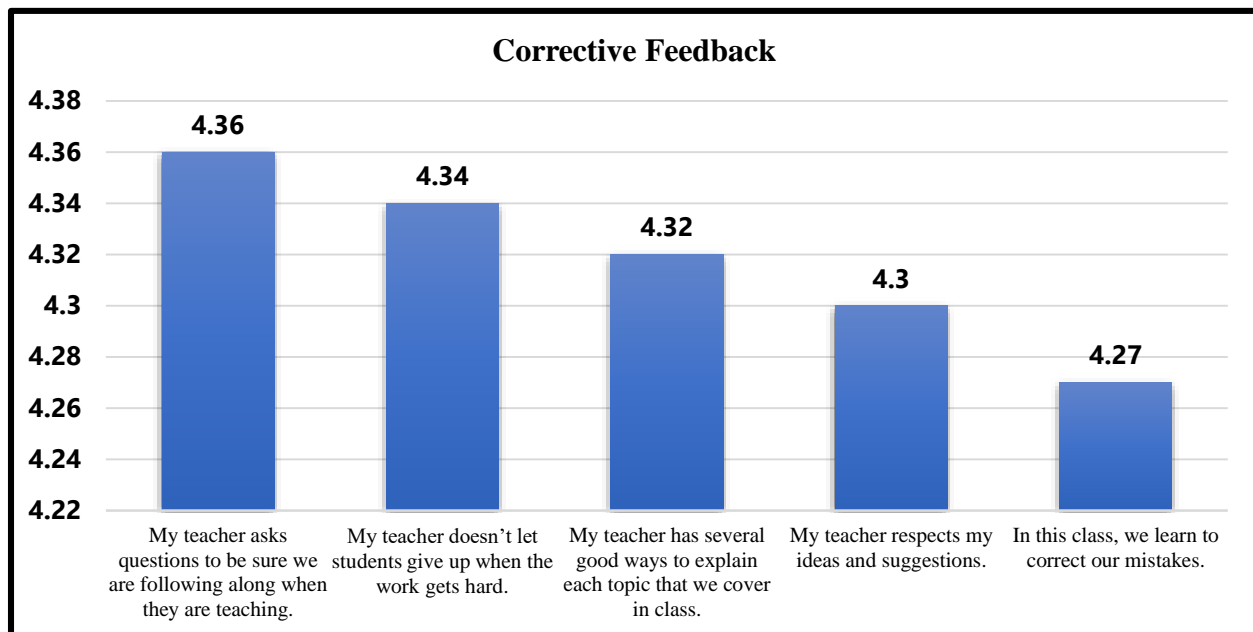


Figure 2 Top 5 Criteria in Corrective Feedback

Figure 2 indicates that students highly value teachers who ask questions to ensure their understanding (4.36), motivate them to persevere through difficult tasks (4.34), and provide

multiple explanations of topics (4.32). Additionally, teachers who respect their students' ideas and encourage them to learn from their mistakes (4.3, 4.27) are appreciated. These results emphasize the importance of engagement, support, and effective teaching methods in enhancing the students' academic experience.

Overall, the students' high scores on these criteria suggest that they value teachers who actively involve them in the learning process and provide a supportive and motivating environment. These results can serve as a guide for teachers to improve their teaching practices and enhance the students' academic performance and satisfaction.

Moreover, this part explored the students' attitudes towards corrective feedback. The results based on the questionnaire data were shown as follows.

Table 2 Corrective Feedback

No.	Criteria	\bar{x}	S.D.	Mean Range
1.	Our class stays busy and doesn't waste time.	3.81	1.11	Good
2.	My teacher knows when the class understands, and when we do not.	4.04	0.93	Good
3.	My teacher has several good ways to explain each topic that we cover in class.	4.32	0.83	Good
4.	My teacher explains difficult things clearly.	4.19	0.91	Good
5.	My teacher makes learning enjoyable.	4.23	0.82	Good
6.	My teacher makes lessons interesting.	4.22	0.89	Good
7.	My teacher asks questions to be sure we are following along when they are teaching.	4.36	0.88	Good
8.	My teacher asks students to explain more about the answers they give.	4.11	0.87	Good
9.	My teacher doesn't let students give up when the work gets hard.	4.34	0.88	Good
10.	My teacher wants me to explain my answers—why I think, what I think.	4.17	0.89	Good
11.	My teacher wants us to use our thinking skills, not just memorize things.	4.20	0.88	Good
12.	In this class, we learn a lot almost every day.	3.98	0.87	Good
13.	In this class, we learn to correct our mistakes.	4.27	0.88	Good
14.	My teacher wants us to share our thoughts.	4.21	0.89	Good
15.	My teacher respects my ideas and suggestions.	4.30	0.8	Good
16.	My teacher gives us time to explain our ideas.	4.24	0.81	Good

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17.	The comments that I get on my work in this class help me understand how to improve.	4.11	0.85	Good
18.	We get helpful comments to let us know what we did wrong on assignments.	4.19	0.81	Good
19.	My teacher checks to make sure we understand what he/she is teaching us.	4.20	0.84	Good
20.	I like the ways we learn in this class.	4.16	0.82	Good
	Average	4.18	0.86	Good

According to the table 2, the top three criteria that received the highest mean scores from the students were: "My teacher asks questions to be sure we are following along when they are teaching." (4.36), "My teacher doesn't let students give up when the work gets hard." (4.34), and "My teacher has several good ways to explain each topic that we cover in class." (4.32). It could be inferred that students appreciated a teacher who was interactive, motivating, and had excellent teaching skills. These results indicated that students valued engagement and were supported from their teacher in their academic journey.

On the other hand, the three lowest scoring items were: "My teacher knows when the class understands, and when we do not." (4.04), "In this class, we learn a lot almost every day." (3.98), and "Our class stays busy and doesn't waste time." (3.81). These results suggested that the students felt that their academic progress and engagement in the class might not be up to their expectations. They also felt that their teacher might not be fully aware of their understanding of the subject matter. Moreover, they might feel that the class was not challenging enough and that there was not enough substance covered in the class to keep them engaged. These results highlighted the need for teachers to be aware of their students' understanding and progress in the class, and for the class to be appropriately challenging and engaging to meet the students' expectations.

In conclusion, this data showed that the students' satisfaction with their teacher was heavily dependent on the teacher's ability to engage, motivate, and provide effective teaching methods. Additionally, the results indicated that the feedback provided to the students should be improved to enhance their understanding and academic progress. Overall, this data emphasized the importance of effective teaching methods and support from teachers in enhancing students' academic experience.

CONCLUSION AND DISCUSSION

This part presents the findings, discussions, and recommendations. The limitations of the study, the implications of the study as well as recommendations for further studies for organizing and improving English courses for grade 10-12 students are also provided in the last section of the chapter.

DISCUSSION OF MAJOR FINDINGS

The part discusses the information of the participants based on the objectives of the study – “To gather information related to cooperative learning and corrective feedback to support the English teaching and learning based on the Zone of Proximal Development (ZPD).

All participants were grade 10-12 students at Wat Phrasimahadhat Secondary Demonstration School, Phranakhon Rajabhat University, Thailand. The experiences concerning the Zone of Proximal Development (ZPD) - Cooperative learning and Corrective Feedback will be presented based on the questionnaire as follows:

There were 284 students who studied Fundamental English I, II, III, IV, V and VI answering mandatory questionnaire in Google form.

All participants were grade 10-12 students who studied in mathematics-science major, Mathematics-English major, English-Japanese major, and English-Chinese major in academic year 2023.

According to the information related to cooperative learning to support the English teaching and learning based on the Zone of Proximal Development (ZPD)”, the results showed that:

The top 5 criteria in Cooperative Learning, based on their mean scores, were (1) Cooperative learning helps me to socialize more, (2) Cooperative learning enhances good working relationships among students, (3) Cooperative learning can improve my attitude towards work, (4) Cooperative learning enhances class participation in sharing information, making decisions, and solving problems, and (5) I willingly participate in cooperative learning activities. The cooperative learning was helping students to socialize more, enhancing good working relationships, improving their attitude towards work, enhancing class participation, and promoting participation in activities. This might be because teachers and students are more successful in groups because they have the opportunities of collaborative work in which the students can learn better and faster and also they can feel that they are an important member in the group that help develop the processes of learning and teaching. So, when they have a positive view towards the learning process, they will learn more efficiently (Widdowson, 1990). Therefore, teaching English is an important issue in Thailand because learning second language is difficult for L2 learners since they cannot use English in real life situations. Teachers should always apply cooperative learning in the classroom to promote the teaching English language (Nunan, 2011).

- The three criteria with the lowest mean scores in Cooperative Learning were: (1) Group activities make the learning experience easier, (2) I feel intellectually challenged through cooperative

learning approach, and (3) The lessons become more interesting with cooperative learning approach. The cooperative learning was helping students to making the learning experience easier, feeling challenged, and having interesting lessons. This might be because after completing the task jointly, the learner will be able to complete the same task individually next time, and through that process, the learner's ZPD for that task will have been raised (Campbell, 2008). Moreover, based on Vygotskian perspective, students were kept in their own ZPDs by giving them interesting and culturally meaningful learning and problem-solving tasks that are slightly more difficult than what they do alone, such that they will need to work together either with another, more competent peer or with a teacher or adult to finish the task (Roosevelt, 2008).

According to the information related to corrective feedback to support the English teaching and learning based on the Zone of Proximal Development (ZPD)", the results indicated that:

The top 5 criteria in Corrective Feedback, based on their mean scores, were (1) My teacher asks questions to be sure we are following along when they are teaching, (2) My teacher doesn't let students give up when the work gets hard, (3) My teacher has several good ways to explain each topic that we cover in class, (4) My teacher respects my ideas and suggestions, and (5) In this class, we learn to correct our mistakes. The corrective feedback provided teachers to be sure students are following the lesson, to support students when the work gets hard, to obtain several ways to explain each topic, to respect students' ideas and suggestions, and to facilitate students to correct themselves. This might be because corrective feedback can help students learn the subject matters deeply. The usefulness of corrective feedback is highly dependent upon the nature of the transaction and mediation provided by the expert in this procedure, and corrective feedback can result in better and deeper learning (Nassaji and Swain, 1997).

The three criteria with the lowest mean scores in Corrective Feedback were: (1) My teacher knows when the class understands, and when we do not, (2) In this class, we learn a lot almost every day, and (3) Our class stays busy and doesn't waste time. The corrective feedback let teacher know when the class understands or not, students learn a lot every day, and the class stays busy. This might be because students can work within their zone of proximal development when they use learning strategies, inner speech, resources in their environment, and experimentation that they have internalized, and to help students understand the lesson well, teachers should insist on receiving feedback for improving the new teaching methods they might try to apply in their classrooms (Scheeler, Ruhl, and MacAfee, 2004)

Limitations of the Study

Although some positive findings were identified in this study to support the effectiveness of the techniques in enhancing the learning skill and the attitudes of language learners, some limitations of this study may be noted before the results will be generalized.

The study is based on the small sample of informants. 284 students studying in grade 10-12 at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University completed the questionnaire via Google Form. The findings cannot be generalized in large sample and territory because of small sample size and limited amount of data from the questionnaire. Even though the informants are not enough to be suitable representatives of the whole population of Thai upper-secondary school students, this group of the sample is big enough to provide the readers some glimpse of what is happening regarding the issue of cooperative learning and corrective feedback to support the teaching and learning by the Zone of Proximal Development (ZPD) in classrooms.

Triangulation with qualitative methodology such as observations or in-depth interviews is needed in order get reliable results.

Implications of the Study

Thailand has experienced the various educational experiments in the name of policy reformations in education for many times. However, the upgrading level of education remained always problematic. Therefore, there is an urgent need to rethink about the school education system. The findings in this study can be helpful in reforming existing educational policy on the practice of school education as well as it is crucial to pay attention to education policy and plan to reduce the adverse effect of education in Thailand.

There are inadequate numbers of studies in related to cooperative learning and corrective feedback to support the teaching and learning by the Zone of Proximal Development (ZPD) in classrooms in Thailand. The results should be applied in the classrooms as follows:

Teachers should utilize the cooperative learning and corrective feedback to support the teaching and learning by the Zone of Proximal Development (ZPD) in classrooms.

The English materials (coursebook, handout, worksheet, etc.) should be consisted of appropriate topics, authentic texts, etc. related to the Zone of Proximal Development (ZPD).

The teachers should adapt the classroom activities that are authentic, motivating, and varied based on the Zone of Proximal Development (ZPD).

The additional materials used in the classroom should be authentic such as video clips, animation, multimedia, PowerPoint presentation, movie, etc. to get the attention from the students based on the Zone of Proximal Development (ZPD).

To be competent in independently learning development, students are required to change their learning styles to be active learning under the Zone of Proximal Development (ZED) circumstance.

The teachers needs to be reformed the teacher roles in the classroom. Instead of acting as an administrator, the teachers should facilitate the students to learn under the guidance by creating a relaxed atmosphere, providing various testing techniques, and suggesting with accuracy.

Recommendations for Further Studies

Given the limitation of this study that consisted of grade 10-12 students at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University, future research might center a wider scale among grade 10-12 students at the demonstration schools of Rajabhat University. Also, data should be garnered from other stakeholders such as parents and the public.

Future research on the Zone of Proximal Development (ZPD) should look at the possible impact that the Zone of Proximal Development (ZPD) has on the operations and policy formation in national systems of public education.

CONCLUSION

This study aimed at investigating effects of ZPD based scaffolding techniques on students' English learning. The subjects were grade 10-12 students majoring in mathematics-science major, Mathematics-English major, English-Japanese major, and English-Chinese major in academic year 2023 at Wat Phrasrimahadhat Secondary Demonstration School, Phranakhon Rajabhat University, Thailand in Fundamental English I, II, III, IV, V and VI. The study focused on students' English learning based on cooperative learning and corrective feedback techniques and students' attitudes towards the Zone of Proximal Development (ZPD) techniques which were applied in the class. The data were obtained from the instrument based on the theory of ZPD. The findings would be significantly beneficial for pedagogical course, in terms of in giving information which can help raise the awareness of how to implement the investigated teaching techniques in the English class, and additionally can be considered as a means of guidance for instruction development for the next academic year. With reference to the study findings, the need on adapting the techniques in terms of the obtained information and the reported concerns of students, which need to be considered prior to applying the techniques into any reading class is required to improve practices in instructional development.

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