POSITIVE INTERDEPENDENCE AND PROMOTIVE INTERACTION IN ONLINE COOPERATIVE LEARNING TO SUPPORT WRITING ACHIEVEMENT

Sussi Nurvianti,[1] Dwi Riyanti,[2] Clarry Sada[3]

[1,2,3] Universitas Tanjungpura, Indonesia

Corresponding author: sussi.nrv@gmail.com

Article info	Abstract
	This study aimed to get a clear description of how positive interdependence and promotive interaction as two of five key elements in cooperative learning account for the success of students' achievement in essay writing. A mixed method design was employed to describe if the characteristics of both positive interdependence and promotive interaction were found in the activities performed by the groups and whether these two elements had the potential to support students' achievement in essay writing. Using Google Classroom as the learning management system to mediate the learning process, there were 52 undergraduate students participated in this study who were divided into 10 small groups consisting of 5-6 students. Data required for this study was collected from both written records of students' activities in online discussions and the scores achieved by the groups on each task. The findings showed an interesting fact that the characteristics of both of the elements were easily found in all parts of the activities performed by all groups in the online discussions. However, the average scores of their works indicated that there was not any meaningful improvement from the first to the last activities. The result implied that although cooperative learning is possible to be applied in an online classroom setting, it needs proper preparation and well-designed writing tasks to make it possible to support students' writing achievement.

INTRODUCTION

The use of cooperative learning to foster academic and social skills gained more attention from educational researchers and teachers in the 1970s (Jacobs & Seow, 2015). It began with the need for social integration between majority and minority students in the classrooms of forced-integrated public schools (Yassin et al., 2018). When compared to competitive and individual learning, cooperative learning is well known for its advantages in the classroom and in social settings. Working together to achieve common aims is what cooperation means. In cooperative settings, participants aim for outcomes that are advantageous to both themselves and the other group members. It can be contrasted with individualistic learning in which students work alone to complete learning goals unrelated to those of the other students and competitive learning which allows students to work against one another to complete academic goals like a "A" grade that only one or a few students can get. Students who respect one another, listen to one another and feel comfortable sharing their opinions and feelings are essential for productive cooperative groups. Johnson and Johnson (2014) provide further explanation about the reason why cooperative learning is superior to individual and competitive learning, it is due to a close connection between social interdependence and achievement. In other words, the more they work together to reach mutual goals, the higher achievement and greater productivity they produce.

Numerous studies have been carried out to investigate its efficacy in enhancing students' achievement. Slavin (1989) is one of the first experts who respectively reported the evidence found in 36 studies which showed that cooperative learning can be an effective strategy for increasing student achievement. In a similar vein, Nastasi and Clements (1991) argue that participation in cooperative learning not only fosters student achievement, but also makes a significant contribution to the improvement of cognitive growth, motivation, positive attitudes toward learning, and social competence. This is supported by Hancock (2004) who argues that cooperative learning also contributes to the improvement of students' motivation in learning, particularly for those who have high peer orientation. However, less study has been done to determine whether cooperative learning, particularly in an online setting, has a positive influence on students' writing achievement.

It takes a lot of work to write in English proficiently. Students' ability to articulate their ideas and thoughts is highly required in producing good writing. As stated by Zhang (2010), foreign language teaching does not merely focus on grammatical issues and vocabulary but also pays attention to the way students use their knowledge to express ideas and thoughts. Therefore, there may be different challenges for different levels of learners, from the sentence structures to their ability to elaborate ideas. To undergraduate students, writing activities might be a helpful way to support their preparation for their research paper or a report of a final project. By having more writing practice, they are expected to be able to learn how to organize their material,

express their argument and reasoning clearly, and make a conclusion that allows the readers to easily understand. However, still many students face difficulties in composing good writing. There are several reasons causing this situation, and one of them might be caused by their hesitance in writing individually.

Doing writing tasks individually generally requires more effort from the students, and at the same time, whether they enjoy it or not, they need to make sure their writing is well-structured and grammatically correct. Many students, in the end, think that writing is not an enjoyable activity and are reluctant to start writing. In addition, in their study, Fareed et al. (2016) find that some problems and challenges faced by undergraduate students in producing good writing are caused by ineffective teaching methods, the lack of writing practice, and the large-sized classrooms.

This study is therefore trying to analyze if cooperative learning facilitates the improvement of students' writing achievement. Positive interdependence and promotive interaction among the students are two principal elements of cooperative learning that will be the focus of the analysis. These two key elements will be analyzed to see if they contribute to students' writing achievement.

Positive interdependence is the core element in cooperative learning in which each member of the group understands their own responsibility to complete each task in order to achieve their common goals. When the members reach the stage of being fully aware of the importance of collective work rather than individual work and believing that they will not achieve success unless every single of the members participates actively in the group work, there goes the realization of positive interdependence. In addition, positive interdependence can be caused by people getting along, being rewarded for working together, sharing resources or overcoming obstacles, belonging to a group whose fate is important to them, needing to divide up tasks to accomplish them, being influenced by personality and cultural orientation, or being tied together because they are being treated unfairly by a common enemy (Deutsch et al., 2006).

The second component, which calls for group members to be willing to assist and encourage one another's efforts to do their responsibilities, is promotive interaction. Stated differently, group members bear the responsibility of fostering each other's success through various means, including but not limited to offering support in comprehending and accomplishing assigned tasks, sharing resources, offering feedback on individual performance, or even debating the outcome in order to gain a better understanding of the problems. Collaborating to create new information in order to achieve the objectives is another way to support promotive interaction.

This study is therefore expected to be another supporting statement that argues if positive interdependence and promotive interaction in online cooperative learning have possibility to provide a basis for the success of students' writing achievement.

METHOD

Research Design

A mixed method design was employed in this study to get a description of whether the characteristics of positive interdependence and promotive interaction were performed in the online discussion and to examine if those two components of cooperative learning contributed to students' writing achievement. Creswell (2012) states that a mixed-method study is conducted to build a better understanding of the research problems by using both qualitative and quantitative data. This study particularly used the exploratory sequential mixed method design that allows the writer to begin with qualitative data to explore and describe a phenomenon, and it is followed by the analysis of quantitative data to see the relationship between both of them.

Setting and Participants

There were 52 undergraduate students who participated in the online discussion, consisting of 11 male students and 41 female students. They took English subject as a required supplementary course in their first year at Universitas Tanjungpura. Coming from various cultural and social backgrounds with different ethnicities, the participants of this study were aged between 17 to 19 years old. The students were randomly assigned into ten groups which consist of five to six students in each group. This formation of composition was based on what is concluded by Gillies (2016) that students perform better achievement when they work in small groups.

In order to meet ethical and legal requirements, the writer disguised the real names of the participants in this study by using codenames to refer to both students and the lecturer. Codenames are index terms that researchers assign to participants as well as other people, locations, and organizations (Heaton, 2022). The writer took a relatively simple alphanumerical form, such as "S1" for Student 1, "S52" for Student 52, and "Lec" for the lecturer.

The class in which this research was conducted was held in a hybrid mode. The students had to attend their weekly face-to-face meeting every Monday and were required to get involved in the online discussion in order to do their group tasks. The writing tasks assigned to the students were mostly about writing essays or compositions based on particular topics and genres provided by the lecturer. They had approximately one to two weeks for the time provided to produce the essay. Meanwhile, the offline meetings were mostly used to provide students with additional resources to support their work in online environments, such as English grammar resources, writing exercises on how to compose a paragraph, note-taking techniques, and sentence-rearranging strategies. These were carried out both individually and

collectively. The lecturer also provided guidance about the writing process to support students' understanding of the tasks they were assigned.

Since the students were assigned some writing tasks in online asynchronous mode using Google Classroom, the discussions were carried out in written form. Through this online learning platform, the lecturer posted the tasks with one particular topic or even some optional topics to be chosen by each group. month of the course. Furthermore, the lecturer on some occasions reminded the students that they would be scored based on the outcomes of their group work, not on individual performance. By following the instructions from the lecturer about how to do it collectively, they started to organize their work, discussed their work in their online forums, created the product together, and submitted their work on the same medium.

Data Collection Method and Analysis

Qualitative data required for this study were collected from documents reviewed on students' comments during the process of writing task completion in Google Classroom. The comments were categorized into those that were attributed with the characteristics of positive interdependence such as understanding the goal of the group, distributing roles in the task completion, and being aware of personal responsibility as well as caring for other's responsibility in accomplishing the task. Comments which exemplified the characteristics of promotive interaction included encouraging and supporting each other, providing help, sharing needed resources, providing effective feedback, and reasoning or challenging ideas with respect. The coding system based on the characteristics of these two cooperative learning elements is provided in Table 1.

Table 1.
Characteristics of Positive Interdependence and Promotive Interaction

Element of Cooperative Learning	Characteristics	Coded as
Positive Interdependence (Post. Int)	Awareness of the members to accomplish the task together as a team	Post. Int 1
	Full participation and put in effort within the group	Post. Int 2
	Each group member has a role/responsibility (division of roles)	Post. Int 3
Promotive Interaction (Pro. Int)	Encouraging each other in the group	Pro. Int 1
	Providing each other with the help needed	Pro. Int 2
	Sharing needed resources	Pro. Int 3
	Providing effective feedback to group members	Pro. Int 4
	Challenging other's reasoning and conclusions to promote better insights of the issues	Pro. Int 5
	Working constructively in the team	Pro. Int 6

Adapted from Gillies (2016)

Each coded comment in each activity was attributed with an information about comment number. The numbering system was simply marked with #, so the first comment in Activity 1, for instance, was marked with #1, the second comment was marked with #2, and so on.

To obtain the quantitative data, the writer used the scores of students' work on the writing tasks provided by the lecturer. The writing products were submitted in Google Classroom. The lecturer then assessed students' work by employing an evaluation rubric to gain the scores of students' writing as well as students' interaction in the online discussion. The evaluation rubric was modified from the works of Delgado and Fonseca-Mora (2010) and Martínez et al. (2011) which was presented in Table 2 below.

Table 2
Evaluation Rubric for Online Writing Activities

Category / Score	High (8-10)	Intermediate (5-7)	Low (0-4)
Organization	Organized content developed into paragraphs	Organized content but without well- developed paragraphs	Content poorly organized or even not organized
Content	Content explains all points that are needed to be included, fosters reader's learning and adds interesting examples	There is a great deal of information provided but is not clearly connected	Include some incorrect information, or information is not of good quality
Topic understanding	The team clearly understood the topic(s) assigned and presented their content in a satisfactory way	The team understands the main points of their content	Some team members or even the team in general do not understand the assigned task
Participation in discussions	Provided many good ideas for the unit development; encouraged others; clearly communicated ideas and questions.	Less participation; rarely support each other; asked questions and made suggestions only on some occasions	Rare or no participation in discussions
Teamwork	Active discussion and good planning are taken place. Individual tasks are interrelated.	There have been some collaboration in the global structure of the discussion	Very limited or no teamwork observable

Adapted from Delgado & Fonseca-Mora (2010)
and Martínez, Herrero, & De Pablo (2011)

A qualitative content analysis was used to analyze qualitative data in this study. Students' postings in Google Classroom were divided into units of analysis named *activity*. This unit of analysis addressed a series of student's comments during an online discussion on each writing task. There were a total of eleven activities in an online classroom setting, however, not all activities were considered cooperative work since some of them were additional individual tasks assigned by the lecturer in the first weeks of the class. Few other activities showed their cooperative discussion, but not on essay writing. There were three activities indicated as cooperative work to produce essays, therefore, these were three activities to be analyzed as the units of analysis. The activities analyzed in this study were described as follows:

1. Activity 1 was posted on March 20, 2023. In this activity, the lecturer asked each group to choose one of the three topics provided and discussed it together in order to produce an essay on the topic chosen. The discussion was held from March 20 to April 5 and there were a total of 1236 comments from 10 groups.
2. Activity 2 was a writing task on the topic of "Is digital technology making children's lives better?" that was posted by the lecturer on May 8, 2023. There were 663 comments posted by students of 10 groups from May 8 to May 15, 2023.
3. Activity 3 was a writing task in which the lecturer provided four different topics and required each group to choose one of them in order to be the topic of their essay. The discussion was started on May 28 and ended on June 1, 2023, with the total number of comments being 740 from 10 groups.

The next stage of the analysis was establishing the elements of positive interdependence and promotive interaction as the analytic categories. This then led to the stage of determining the characteristics of both elements as the criteria of selection for sorting data into analytic categories. The criteria of the characteristics can be seen in Table 1. The analysis continued to the coding stage in which each comment that exemplified the characteristics of positive interdependence and promotive interaction was coded based on the criteria of the characteristics. The number of comments coded in each characteristic was further counted to get a descriptive statistic. Finally, the result was reviewed in accordance with relevant theories in order to get an explanation of the findings.

The average score of each group on each writing task was observed and compared to see if there was an improvement in their cooperative work from the first activity to the last activity. The result was correlated with the existence of positive interdependence and promotive interaction that can be found in most of the comments in the online discussion.

FINDINGS AND DISCUSSION

Findings

During the analysis of the comments, the researcher found that there was a large number of comments classified as the characteristics of positive interdependence and promotive interaction in every activity. In activities 1, 2, and 3, most of the groups showed their ability to work cooperatively in order to accomplish the task.

Positive Interdependence in Online Cooperative Discussion

The characteristics of positive interdependence could be seen by the appearance of comments that showed the awareness of members of the group to accomplish the task together (Pos. Int 1), the ability of the members to fully participate and put their efforts within the group discussion (Pos. Int 2), and the division of roles or responsibilities among members of the group (Pos.Int 3). All the characteristics were found in all group discussions on each activity with the total number of more than 1000 comments on three activities. The first characteristic was always found at the beginning of the discussion, such as what was shown in Activity 1:

Group 1:
"Which one do you think we should choose from the three materials we have available for discussion topic?"

(Pos.Int 1) posted by S40

Group 2:
"Hi everyone, so we will do our task that has been given by Lec. Well, before we start, of course, we have to choose which one we will discuss for this task. What do you think is a good discussion for us to discuss?"

(Pos.Int 1) posted by S15

Group 3:
"Hallo guys🤝How about we choose a topic for the essay first?"

(Pos.Int 1) posted by S30

Group 8:
"Friends, let's start the discussion tonight. What topic are we going to take?"

(Pos.Int 1) posted by S13

The comments above showed the awareness of the members in the groups to start working together which reflected the first characteristic of positive interdependence. They started the discussion by asking other members of the group to choose what they thought as the most appropriate topic of their essay. This was a starting point of being

aware that they need to cooperate to accomplish their joint goals. The comments above then led to the next characteristic of positive interdependence, in which the students fully participated and put in effort within the group (Pos.Int 2). Some following comments exemplified this characteristic:

Group 1:
"I think topic 3 (when we encounter a bully) is nice to be our discussion. How about you guys?"

<div align="right">(Pos.Int 2) posted by S41</div>

"Well, what if we start by setting the basis of the discussion first?"
<div align="right">(Pos.Int 2) posted by S40</div>

Group 3:
"I chose topic number 3, how about you guys? Please vote, after that we will deal with the most votes."

<div align="right">(Pos.Int 2) posted by S30</div>

Group 8:
"How about the third topic?"

<div align="right">(Pos.Int 2) posted by S2</div>

"When we encounter a bully, it can be frightening and overwhelming experience, right?"

<div align="right">(Pos.Int 2) posted by S2</div>

These comments could be seen throughout the discussion in each group on each activity. They typically appeared right after comments showing the first characteristic of positive interdependence. These kinds of comments showed how the members of the group tried to participate in the discussion as they responded to questions raised by other members about choosing the best topic.

At a further stage of the discussion, it is found that the third characteristic of positive interdependence which depicted the division of roles or responsibilities among members of the groups (Pos.Int 3) existed as the result of the appearance of the previous characteristics. This could be seen from these comments:

Group 1:
"Well, i will send for the fourth paragraph which is explain about impact when we encounter a bully.

The bullying experience could seriously affects someone's psychology, physical, academic and social well-being. The psychological effects on the bullying victims such as depression, anxiety, low self-esteem, insecure, being introverted and withdrawn from the society. The physical effects could include physical assault injuries, sleep disturbances, stomach aches, headaches, palpitations, dizziness, bed

wetting, and chronic pain and somatization. Even worse, people who were bullied tend to think or try to commit suicide. And for the bullies they can also be affected by psychological problems such as negative perceptions of themselves and others, poor social skills, behavioral problems, and rejection by their peer group."

<div align="right">(Pos.Int 3) posted by S25</div>

Group 2:
"Okay so the division of tasks is:
What is bullying? S23
To whom does the bullying usually occur ? S23
When does bullying usually occur? S21
Where does bullying usually occur? S26
How to deal with bullying?"

<div align="right">(Pos.Int 3) posted by S23</div>

Group 3:
"So this is the division of tasks to make sentences in one paragraph according to the material:
Paragraph 1 : Done
Paragraph 2: S30
Paragraph 3: S27
Paragraph 4: S49
Paragraph 5: S31
Paragraph 6 : S46"

<div align="right">(Pos.Int 3) posted by S30</div>

Group 7:
"Now, let's share that each person makes 1 paragraph based on the problems we have created. When it's finished, we can correct together whether it's right or not."

<div align="right">(Pos.Int 3) posted by S33</div>

The comments above showed that the discussion moved from the first characteristic to the second to the third characteristic of positive interdependence. The third characteristic of positive interdependence that indicated the division of roles among group members was depicted clearly in the comments above. It was when each group member gained awareness about their role or responsibility in the success of accomplishing the task.

Once the comment had only one characteristic such as awareness of the members to work together as a team, and at the other times were found more comments with more than one characteristic in a single comment. This exemplified that the characteristics of positive interdependence could also be followed by the characteristics of promotive interaction at the same time in a single comment. In this stage, the students were not only required to be aware of their responsibility but also were involved in the process of supporting each other to fully understand what they were doing in order to

accomplish the task.

The comments exemplifying various characteristics of both positive interdependence and promotive interaction in a single comment were stated below:

Group 1:

"What if the fifth paragraph is a solution to overcome bullying?"

(Pos.Int 2/ Pro.Int 5/ Pro.Int 6) posted by S14

Group 3:

"Here's the list, let's fill it out, guys. Paragraph 1 about 'What Bullying is' Paragraph 2 about 'Types of Bullying'
Paragraph 3 about 'The negative impact felt by victims of Bullying'
Paragraph 4 about 'Examples of Bullying Cases'
Paragraph 5 about 'How to deal with Bullying' and also we make a conclusion in the fifth paragraph"

(Pos.Int 3/Pro.Int 1/Pro.Int 6) posted by S31

Group 5:

"So in paragraph 1 we talk about definition, can we add the characteristic of a bully too? or we make in different paragraph?"

(Pos.Int 2/Pro.Int 5) posted by S22

Group 8:

"Let me explain what bullying is. Bullying is an immoral act that intentionally damages someone's mentality on purpose. Bullying someone is already included as a big crime. Of course, this is very harmful, especially for school students. Even worse, this bullying can have fatal consequences such as suicide due to continuous bullying."

(Pos.Int 2/Pro.Int 3/Pro.Int 6) posted by S51

The comments above exemplified how positive interdependence is closely related to promotive interaction which is reflected in the appearance of both elements in a single comment. This fact was spread evenly throughout the group in every activity assigned by the lecturer. In one of the comments stated above, the characteristic of positive interdependence was shown by a student in group 3 who tried to make a division of roles among members of the group by asking them to choose their favourable part of the essay. The way that the student asked her friends to do it somehow was classified as the core characteristic of promotive interaction, it is encouraging each other during the process of task completion.

In another comment provided above, a student in group 5 put an effort to actively participate in the discussion by re-emphasizing what they had agreed about. This was a characteristic of positive interdependence in cooperative learning. At the same time, she proposed an idea to support the agreement and challenged her friends to state their opinions about it. What she had done in this part reflected the characteristic of promotive interaction.

Promotive Interaction in Online Cooperative Discussion

As the second element in cooperative learning, promotive interaction plays a significant role in the success of cooperative learning. All of the characteristics of promotive interaction were found everywhere throughout the online discussion in all groups and all activities. The following comments on Activity 1, Activity 2, and Activity 3 were the examples:

Activity 1 Group 9:
"In my opinion, bullying is any form of oppression or violence both verbally and non-verbally or physically, which is carried out by individuals or groups of people who are more powerful and stronger against people who are weaker, continuously so that people feel hurt."

<div align="right">

(Pro. Int 3) posted by S37

</div>

Activity 3 Group 10:
Paragraph 1 explains the views regarding cases of drug addicts who should get help, not punishment. so we explain it. why only get help, why not the punishment. because of that in paragraph 1 I give the definition of drug addicts followed by examples of narcotics. then explain why you just need help. ended with the view that drug addicts must get help and punishment simultaneously so that the offender can be released from addiction and does not affect the surrounding environment to consume narcotics. For paragraph 2, what S3 conveyed was quite good and detailed.

<div align="right">

(Pos.Int 2/Pro.Int 3/ Pro.Int 6) posted by S3

</div>

An interesting fact about the third characteristic of promotive interaction was that there was a limited number of comments that showed it in a single comment. Most of the comments with this characteristic were found to be interchangeably bound with other characteristics of both promotive interaction and positive interdependence. This fact applied similarly to the other characteristics, which constructively support the theory of positive interdependence that is closely linked with promotive interaction in cooperative learning.

Activity 1 Group 3:
"That's right, S49. It will make it easier for us to choose paragraph material from each member."

<div align="right">

(Pro.Int 4) Posted by S21

</div>

Activity 2 Group 2:
Okay guys, then maybe we need to add a few paragraphs that are unique about technology for these children's, such as self-development and empowerment, social connections and technology collaboration for children's, self-expressions, education and learning and the last conslution about this task.

<div align="right">

(Pro.Int 4/ Pro.Int 6) Posted by S15

</div>

Activity 3 Group 4:
I think it's a great topic because nowadays everyone surely uses social media.

(Pro.Int 4) Posted by S39

These are some comments that exemplify the fourth characteristic of promotive interaction, which is providing effective feedback to group members. The following comments indicated the fifth characteristic of promotive interaction, which is challenging other's reasoning and conclusions to promote better insights into the issues.

Activity 1 Group 3:
"Hi guys, I want to ask something. Does paragraph 4 mean the case of bullying in Indonesia? Can you guys tell me soon? Is it okay if I only write 1 example of a case of bullying? or you guys want 2 or more? What do you think is good guys?"

(Pro.Int 5) posted by S49

Activity 3 Group 7:
Morning all. What are the discussions that we will include in the discussion of this topic, friends?

(Pro.Int 5) posted by S45

The way the members asked other members' reasoning to promote clearer concept of the issue chosen demonstrated typical characteristic of promotive interaction.

Activity 1 Group 5:
"Okay guys, but maybe we can also mention our experienced about bullying, and how did we respond to that"

(Pro.Int 6) posted by S7

Activity 2 Group 9:
Okey, In my opinion, after giving an explanation in paragraph one, positive and negative effects or impacts are very suitable to be placed in the second paragraph. After I read, there are 4 opinions that discuss the impact.

(Pro.Int 6) posted by S48

The last characteristic of promotive interaction was found in comments above. When students were able to work constructively in the team, it indicated their persistence to work cooperatively.

In conclusion, the characteristics of promotive interaction are clearly seen in almost all comments in each activity. Furthermore, comments with characteristics of promotive interaction were found to dominate in all activities assigned. More students' comments were seen to meet the characteristics of promotive interaction, in which they provide support and help to each other. They were also capable of providing feedback to other members of the group, as well as working constructively to achieve their mutual goals.

Scores of Students' Work

As the quantitative data in this study, the scores of students' work were used as the main consideration to see if the elements of positive interdependence and promotive interaction in online learning contributed to the improvement of students' writing achievement. The writer gained students' scores from the lecturer who taught their class during the semester.

In Activity 1, six groups were scored with 8 – 8.5, which was described as a high level of achievement. There were four groups which were scored with 7.8, which is classified as intermediate level.

The scores in Activity 2 showed a decline from the scores in Activity 1. There were four groups that scored 8 to 8,5 (high level of achievement) and six groups were scored lower between 6 and 7,6. The activity required them to discuss a topic provided by the lecturer and present their ideas in an essay consisting of five to six paragraphs. Some groups were found to have a very limited amount of discussion in order to produce an essay. Some others were found to have only some members in the groups who were dominating the discussion and some others remained passive with only a few comments seen in the online forum. It seemed that students' lack of awareness of cooperative work might be considered as the reason for their declining scores.

The last activity in this study showed a better improvement compared to the previous activity. Similar to activity 1, six groups were categorized as reaching a high level of achievement with scores ranging from 8 to 8,3. On the other hand, four other groups earned scores of 6,5 to 7,8 which led them to be categorized as reaching the intermediate level of achievement. Something interesting found in this activity was the fact that the students appeared to be more active in participating during the online discussion. One reason behind this fact might be because the score of this activity was counted by the lecturer as the score of their final-term examination. This reason somehow contributed to the lively and higher quality of discussion in most of the groups. As a result, they gained higher scores compared to theirs in previous activities.

The average scores of each group in each activity are figured in Table 3 and Figure 1 below.

Table 3

Group Scores in All Writing Activities

Group	Activity 1	Activity 2	Activity 3	Average	Total
1	7.8	6.8	7	7.2	21.6
2	8.2	7.6	8	7.93	23.8
3	8.2	8	8	8.06	24.2
4	7.8	6.2	7.8	7.26	21.8
5	8.5	6	7.8	7.43	22.3
6	7.8	7	6.5	7.1	21.3
7	8	8	8	8	24
8	7.8	6.8	8	7.53	22.6
9	8.5	8.5	8.2	8.4	25.2
10	8.5	8.2	8.3	8.3	25
Average	8.11	7.31	7.76	7.72	23.18
Total	81.1	73.1	77.6	77.26	231.8
Max. score	8.5	8.5	8.3		
Min. score	7.8	6	6.5		
Mean	8.1	7.3	8		

Figure 1
Chart on Average Group Score on Each Activity
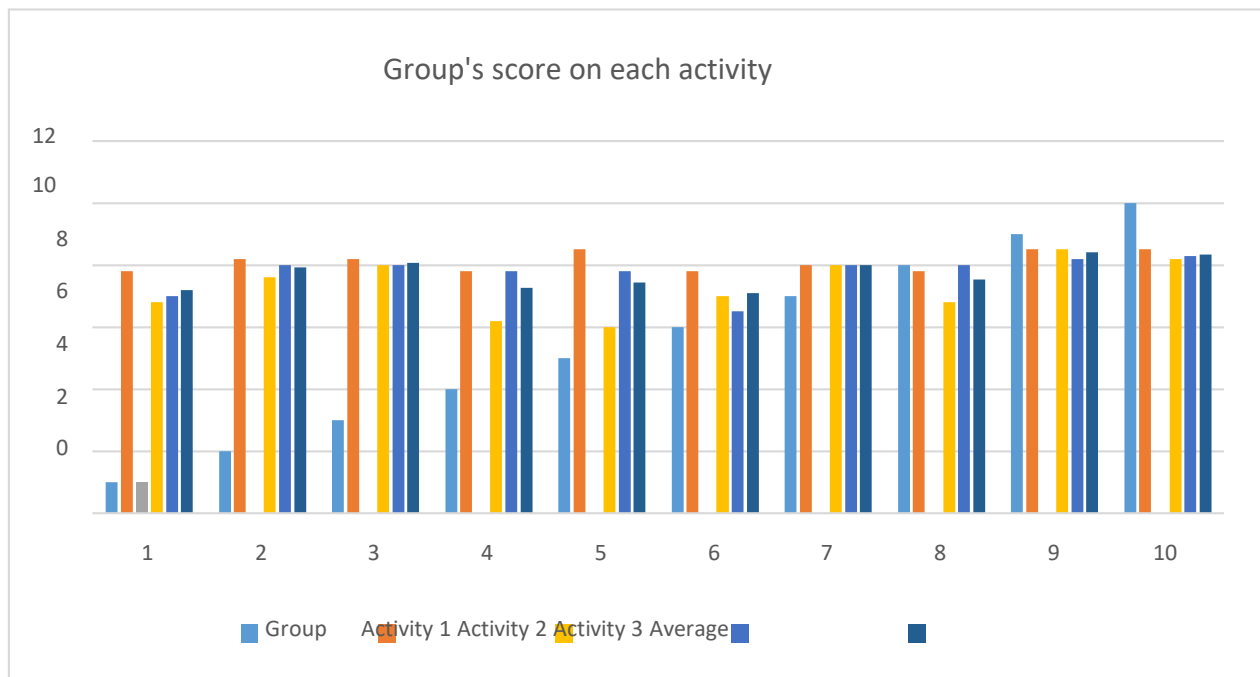
The table and chart above depicted the average score of each group's work on each activity in which there were no trends of significant improvement in group scores from activity 1 to activity 3. There was not any single group whose scores consistently improved from the first to the last activities. All groups had similarly shown that their scores were fluctuating in every activity. Among the three activities assigned, only Activity 1 and Activity 3 showed a high level of achievement based on the average scores of all groups. Activity 2 was considered as gaining lower achievement as the average score of the groups in each activity ranged only on 7,21 to 7,76.

Discussion

The qualitative findings above suggested that the characteristics of positive interdependence and promotive interaction were obviously found in most of the comments in all groups and in all writing activities. The most frequently observed types of comments were classified as "Pos.Int 3", "Pro.Int 4", and "Pro.Int 6". Even though there were fewer number of comments categorized as "Pos.Int 2", this characteristic respectively appeared as the result of the existence of "Pos.Int 1". Dominant appearance of "Pos.Int 1" in almost all beginnings of the online discussions somehow played a role as a general statement that the element of positive interdependence existed as the core element of cooperative learning to support them gaining their goals. This what was similarly found in a study conducted by Nam and Zellner (2011) who previously believed that positive interdependence in online cooperative environments affected students' achievement.

The characteristics of promotive interaction is distinctively appeared in every activity majority as "Pro.Int 4" and "Pro.Int 6". It was characterized by the ability of the students to provide effective feedback on others' comments, as well as the willingness to work constructively in the team. In this part, the students also tried to integrate and accommodate critics and suggestions posted in the previous comments.

Although there were fewer comments that literally show the way students encourage each other as a team, it did not necessarily mean that the element of promotive interaction particularly that was coded as "Pro.Int 1" did not significantly reflected in the discussions. Comments exemplifying promotive interaction, however, were captured implicitly in several comments which also showed the characteristics of positive interdependence. This fact led the researcher to argue that promotive interaction as an element of cooperative learning was possible to be found in the online mode of learning. This result also supported the statement of Al-Jarf (2022) that engaging students and getting them to participate, connect, and communicate with their classmates and instructors in online learning was not difficult.

Furthermore, the findings mentioned in the previous section prove that the existence of

positive interdependence in the discussion is closely related to the existence of promotive interaction. Qualitative data showing more than one code of characteristics in a single comment throughout the discussions proved the strong connection between the two elements. This was in line with the previous theory that came from Laal (2012) who believed that when positive interdependence existed in cooperative settings, it would result in the presence of peer encouragement and peer tutoring, which were the core of promotive interaction.

On the other hand, quantitative data in this study exemplified that the average scores of students' group work fluctuated, which meant that there was not any consistent improvement in students' writing achievement from Activity 1 to Activity 3. Unfortunately, this should lead to a statement of the negative contribution of positive interdependence and promotive interaction as two major elements of cooperative learning to the improvement of students' writing achievement. The lack of teacher presence during the online discussion might be one of the reasons contributing to the failure to improve students' achievement in online cooperative learning. As mentioned by Al-Jarf (2022), the instructor needed to encourage the pupils to write and submit anything that interests them instead of focusing on grammar and spelling issues. She argued that encouragement and uplifting words were crucial in cooperative learning since students required a safe, encouraging atmosphere for online learning so they could experience a valuable learning process.

However, the positive engagement that the students performed during the online discussion had to be positively appreciated as most of them were able to show their best effort in achieving their learning goals. In addition, the flow of discussion held by each group in all activities had been a helpful process for the students to accomplish the writing tasks assigned by the lecturer. It is, indeed, successfully let the medium of discussion as a tool to facilitate the emerging their ideas and transform it into a cooperative work in which a huge amount of cooperative values are learned.

CONCLUSIONS

The research described in this paper has the limitations of only looking at the contribution of positive interdependence and promotive interaction in online classroom settings courses. In addition, the course in which this study was not directly taught by the researcher, so the researcher had limited access to organize the class, design the materials, and assist the students during the discussions. Furthermore, the use of cooperative learning in this course was the lecturer's very first experience in teaching the English language. The results in this research should only apply to the classes where the investigation took place because they might not generalize to other contexts and students.

What might be improved in this scope of research is the variation of writing tasks assigned to the students. The organization of the tasks must be one of the important

parts to be considered. It would be better if the tasks given were ranged and started from a lower level of difficulty to a higher level of complexity. Another suggestion would be about the teacher's presence in cooperative learning. The lecturer, however, plays a significant role in cooperative learning. As the learning was held in a hybrid mode, it was important for the lecturer to maximize her/his role in guiding the students to successfully work cooperatively. The teacher did not need to be present in every situation, but she/he should be able to guide the students anytime it seemed they were out of the line. By providing this guidance, the discussion should have been more valuable and meaningful.

Lastly, since there was limited number of research conducted to analyze positive interdependence and promotive interaction as a unity in cooperative learning, further research should be conducted to explore the findings of these elements in both online and offline classroom settings. By comparing these different modes of cooperative learning, it is expected that the study would bring about a broader view and value of cooperative learning in language learning development.

REFERENCES

Al-Jarf, R. (2022). Interaction analysis in online learning communities: The student leader. *Journal of Learning and Development Studies*, 2(2), 22–38. https://doi.org/10.32996/jlds.2022.2.2.4

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Pearson. https://doi.org/10.1017/CBO9781107415324.004

Delgado, M. A., & Fonseca-Mora, M. C. (2010). The use of co-operative work and rubrics to develop competences. Education for Chemical Engineers, 5(3), e33–e39. https://doi.org/10.1016/J.ECE.2010.05.002

Deutsch, M., Coleman, P. T., & Marcus, E. C. (2006). *The handbook of conflict resolution: Theory and practice* (Second Ed; M. Deutsch, P. T. Coleman, & E. C. Marcus, eds.). John Wiley & Sons, Inc.

Fareed, M., Ashraf, A., & Bilal, M. (2016). ESL learners' writing skills: Problems, factors and suggestions. *Journal of Education & Social Sciences*, 4(2), 83–94. https://doi.org/10.20547/jess0421604201

Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education*, 41(3), 39–54. https://doi.org/10.14221/ajte.2016v41n3.3

Hancock, D. (2004). Cooperative learning and peer orientation effects on motivation and achievement. *Journal of Educational Research*, *97*(3), 159–168. https://doi.org/10.3200/JOER.97.3.159-168

Heaton, J. (2022). "*Pseudonyms are used throughout": A footnote, unpacked. *Qualitative Inquiry*, *28*(1), 123–132. https://doi.org/10.1177/10778004211048379

Jacobs, G., & Seow, P. (2015). Cooperative learning principles enhance online interaction. *Journal of International and Comparative Education*, *4*(1), 28–38. https://doi.org/10.14425/00.76.07

Johnson, D. W., & Johnson, R. T. (2014). Cooperative learning in 21st century. *Anales de Psicologia*, *30*(3), 841–851. https://doi.org/10.6018/analesps.30.3.201241

Laal, M. (2013). Positive Interdependence in Collaborative Learning. Procedia - Social and Behavioral Sciences, 93(October 2013), 1433–1437. https://doi.org/10.1016/j.sbspro.2013.10.058

Martinez, C. T., Kock, N., & Cass, J. (2011). Pain and pleasure in short essay writing: Factors predicting university students' writing anxiety and writing self-efficacy. Journal of Adolescent & Adult Literacy, 54(5), 351-360.

Nam, C. W., & Zellner, R. D. (2011). The relative effects of positive interdependence and group processing on student achievement and attitude in online cooperative learning. *Computers and Education*, *56*(3), 680–688. https://doi.org/10.1016/j.compedu.2010.10.010

Nastasi, B. K., & Clements, D. H. (1991). Research on cooperative learning: Implications for practice. *School Psychology Review*, *20*(1), 110–131. https://doi.org/10.1080/02796015.1991.12085536

Slavin, R. E. (1989). Research on cooperative learning: An international perspective. *Scandinavian Journal of Educational Research*, *33*(4), 231–243. https://doi.org/10.1080/0031383890330401

Yassin, A. A., Razak, N. A., & Maasum, N. R. M. (2018). Cooperative learning: General and theoretical background. *Advances in Social Sciences Research Journal*, *5*(8), 642–654. https://doi.org/10.14738/assrj.58.5116

Zhang, Y. (2010). Cooperative language learning and foreign language learning and teaching. *Journal of Language Teaching and Research*, *1*, 81–83. https://doi.org/10.4304/jltr.1.1.81-83