Undergraduates vs. postgraduates attitudes toward cooperative learning in online classes in different settings

Hind Abdulaziz Al Fadda
Department of Curriculum and Instruction, College of Education,
King Saud University, Riyadh, Saudi Arabia

Rasha Osman Abdel Haliem
Higher Technological Institute, Cairo, Egypt

Hassan Saleh Mahdi
English Department, Faculty of Education, Hodeidah University,
Hodeida, Yemen, and

Reem Alkhammash
English Department, University College, Taraba, Taif University, Taif, Saudi Arabia

Abstract

Purpose – Substantial changes in the education system and the shift to online classes during the lockdown have raised teachers' attention to the idea of practicing cooperative learning in online environments. Cooperative learning activities enhance academic skills if designed effectively. This study aims to explore students' attitudes toward cooperative learning in online learning environments.

Design/methodology/approach – This study is a descriptive study. A survey was administered to 50 graduate and postgraduate students of English as a Foreign Language.

Findings – Results indicated that the students had positive attitudes toward the integration of cooperative tasks in online environments. They also revealed no significant differences in the attitudes toward cooperative learning based on the students' level (i.e. undergraduate or postgraduate) and that the students preferred small groups.

Originality/value – Cooperative learning is a widely researched topic, especially in higher education. However, most of the previous studies reported results of the implementation of cooperative learning in traditional classrooms. This study aimed to fill this gap by examining the impact of online tools on cooperative learning.

Keywords Cooperative learning, Instruction, Interaction, Language level, Group size

Paper type Research paper

Introduction

There is a continuous debate about which effective instructional techniques should be adapted in higher education. Cooperative learning is a desired model of instruction as it enables students to interact and learn better. The model is based on designing group activities with shared goals, tasks and learning outcomes. The opportunities offered by cooperative learning are not limited to improving interactions between students and instructors but also extend to support evidence-based learning (Zheng *et al.*, 2015).

In cooperative learning, the teacher's role increases as they design cooperative tasks, try to create balanced teams and remain present for inquiries, guidance and support. Teachers become facilitators of students' learning by providing guidance and ensuring their students' active participation. Johnson *et al.* (2013) pointed out that cooperative learning has five fundamental elements: positive interdependence, promotive interaction, individual responsibility, group processing and interpersonal skills. Cooperative learning is an instructional method based on teamwork, in which students work on tasks to achieve a specific goal or learning objective. It is suitable for students with different learning styles and covers a wide range of learning abilities. English as a Foreign Language classes and postgraduate classes, cooperative learning is practiced to prepare students for life. However, practicing cooperative learning online is relatively new and requires choosing effective e-tools that enhance interaction and collaboration. Accordingly, it motivates students and makes them stakeholders in their learning.

Cooperative learning is a widely researched topic, especially in higher education (see Loh and Ang, 2020). Cooperative learning can be enhanced in online environments, but most of the previous studies reported results of the implementation of cooperative learning in traditional classrooms. Therefore, it is necessary to explore the effect of online environments to foster cooperative learning. This study aims to fill this gap by examining the impact of online tools on cooperative learning.

Review of literature
Cooperative learning
Active learning involves engaging students via tasks that advocate discussion, interaction and product creation. According to Ng *et al.* (2020, p. 285), active learning refers to "classroom practices that engage students through activities as opposed to classroom practices that render students as passive receivers of information." Active learning is highly advocated because it supports learning in depth. Eggen *et al.* (2006) recommend giving tasks that entail considerable autonomy and control of the direction of learning activities as well as stimulate interaction and critical thinking. Jacobs and Power (2016) advocate using both teacher-centered and student-centered approaches to enhance student interaction, learning involvement and content evaluation. One way to facilitate a more student-centered approach within the classroom is by utilizing cooperative learning strategies.

Cooperative learning is an instructional strategy that targets both academic and social skill learning by involving students in time-honored, sustained learning groups or teams. Jolliffe (2007) explains that cooperative learning requires students to interact, work and support one another in small groups to improve their learning and social skills and be prepared for the work market. The incorporation of this type of learning strategy means that the teacher's role changes as they design cooperative learning tasks and guide and support students. In cooperative learning, the teacher designs student-centered learning activities that promote academic and cognitive improvement. It requires the active engagement, hard work and interest of students and entails the preparation and enthusiasm of instructors. Cooperative learning has been shown to be an effective tool for classroom instruction and has been advocated and practiced in renowned learning institutions ranging from pre-school to graduate school levels. Students from different backgrounds work together on a task, in which they are responsible for working individually and as a team. The learning goals require team members to comprehend and execute the given tasks. Cooperative learning fosters interaction. It allows practice and retention of the relevant concepts taught, increase academic achievement, fosters 21st-century skills and prepares students for life. Cooperative learning can be incorporated into different subjects, such as Chemistry, Engineering, Nursing, Mathematics, English and Teaching English to Speakers of Other Languages (TESOL).

Studies have shown a remarkable increase in students' learning and acquisition of 21st-century collaboration skills through integrating the cooperative learning model. Cooperative learning also increases self-confidence, presentation skills and critical thinking consciousness. Unfortunately, most university teachers are not trained to incorporate cooperative learning in the traditional classroom, much less in the online classroom. Numerous research studies have revealed that students who performed cooperative learning tasks achieved higher academic results and gained confidence and social skills (e.g. Johnson *et al.*, 2007; Millis, 2009; Strebe, 2017).

Cooperative learning can be successful via positive interdependence when all team members work on mutual goals. Interaction, personal accountability (i.e. each student is responsible for a part of the task), teacher facilitation, guidance and monitoring are also factors in making cooperative learning successful (Kagan, 2015). Various theories form the foundation of cooperative learning, the most relevant of which are social interdependence, cognitive-developmental and behavioral theories (Cohen and Lotan, 2014). In addition, Grabe (2019) reports the relevance of the teacher's role during cooperative work. Teachers should be available for questions during students' individual and group work. A teacher becomes a guide, a coach and a facilitator.

Social interdependence theory

Social interdependence theory triggers some of the most commonly used cooperative learning procedures (Johnson and Johnson, 2002). The basic principle of this theory is that the structure of the goals of the people in the situation defines how members interact. The interaction forms then determine the outcomes of the situation (Johnson and Johnson, 1989). A goal structure stipulates the type of interdependence among individuals' goals, which establishes, in turn, how individuals must interact to achieve their goals. The interaction either encourages and facilitates the goal achievement of others or impedes and blocks their goal accomplishment. Interaction may be direct or indirect. Direct interaction occurs through different means, such as oral, written or electronic communication. Indirect interaction takes place when a person acts in a way that increases or decreases the chances of other persons to accomplish their goals successfully without actual interaction taking place. Within competition, interaction may be indirect or completely oppositional. Outcomes are the results of the interaction. The way goals are configured defines the direct and indirect interaction patterns, which, in turn, determine outcomes (Johnson and Johnson, 2005). Practical procedures from social interdependence theory have been used at the classroom level, such as the teacher's role in structuring cooperative learning. The connection among theory, research and practice makes cooperative learning—to some extent—unique.

Techniques of cooperative learning

Think-pair-share. Several techniques can be utilized within a classroom or in an online learning environment. Think-Pair-Share, adopted from Lyman (1992), is a technique that requires two members per group. In this technique, the teacher asks a question or poses a problem. Students reflect and then pair together to discuss their ideas. Individual students are then called upon to share their answers (or the answers of their partners) with the whole class (Baloche, 1998). Think-Pair-Share enhances reflection, interaction and critical thinking. It can be used in schools, universities and training classes as well as applied online via Microsoft teams, Google Classroom, Zoom and Blackboard, all of which allow pairing and grouping.

Jigsaw. Another cooperative learning technique is Jig Saw, a process Jacob *et al.* (2016) advocates whereby a required task is divided into parts to be done in class or at home. The teacher divides the material into sections, one section for each student, and the students read, conduct experiments and solve problems. The students' preparation can be done during class

time or for homework. They can prepare individually or with partners based on the teacher's decision, the nature of the assignment and their abilities. Eventually, each student meets with someone from a different group who has learned the same material to discuss what they understood in order to review and intellectualize the material. They may even plan how the material might be best presented to their teammates. Then, the students present their work to other members of their groups. During the presentation, the teacher encourages students to engage in a genuine discussion and pose questions. Students then reflect on the presentation. Baloche (1998) points out that the jigsaw technique fosters understanding, interaction and reflection. It can also be adapted online via Blackboard, Google Classroom and Microsoft Teams

Roundtable. Another cooperative learning strategy is roundtable, where the typical group size is three or four members. The teacher poses a problem, and the students contemplate and write by themselves. Then, they go around the table to share their responses and may create a poster to showcase the discussion (Baloche, 1998). Roundtable can be applied in online classes using Blackboard, Google Classroom, Zoom and Microsoft Teams, in which groups cover a topic, discuss it together and then students present their work and results online.

Benefits of cooperative learning. Cooperative learning has many benefits, both individual and collective. For individual benefits, cooperative learning enhances not only social and emotional intelligence but negotiation and persuasion abilities as well. It likewise improves methodical learning (Çolak, 2015), builds character and enhances awareness. For collective benefits, cooperative learning trains students on the ethics of teamwork. It prepares students for their future lives when they eventually work and deal with people from all walks of life. If students are given a mission that has to be accomplished on a certain date, cooperative learning teaches them discipline and time management.

The benefits of cooperative learning can be categorized and summarized into three aspects: academic, affective and social competence (Loh and Ang, 2020). The academic benefits include knowledge acquisitions and growth in intellectual and academic skills. Cooperative learning makes students more active in the learning process. It also improves students' attitudes toward learning, which in turn increases their knowledge retention (Shimazoe and Aldrich, 2010). The affective benefits involve the emotional aspects of learning, such as appreciation, enthusiasm, motivation and values, wherein one becomes more involved and self-reliant in their learning (Du, 2015). One of the affective benefits of cooperative learning is autonomous learning. Autonomous learning can be a powerful force to help language learners proceed with their learning. Students are highly motivated and enjoy learning more if they can learn autonomously (Thanh *et al.*, 2008). The social benefits include the ability to get along with others in acceptable and appropriate ways. Cooperative learning enables learners to interact with their peers and instructors in several ways. These social interactions involve robust interpersonal social skills and cooperative skills (Cavanagh, 2011; Thanh *et al.*, 2008). With the help of these skills, learners can depend on one another to solve problems cooperatively.

As a teaching technique, cooperative learning supports the learning styles of nearly all students regardless of age. Nonetheless, it is not widely practiced because it requires a lot of planning. In addition, administration and policymakers concentrate on finishing syllabus content rather than teaching methodology. Jacobs and Power (2016) and Ransdell and Moberly (2003) explain that cooperative learning is an underused teaching technique. Strebe (2017) advocate cooperative learning for its character-building, motivational aspects and applicability to many instructional fields. Jacobs and Power (2016) and Strebe (2017) enforce designing flexible tasks while putting the traits and cultural backgrounds of students into consideration. According to Akinbobola (2009), cooperative learning creates a more positive learning experience than competitive or individualistic strategies. The author also notes that

in cooperative learning, students are trained on interaction, negotiation and channeling efforts.

The terms *collaborative learning* and *cooperative learning* are normally used interchangeably as they target students' engagement while creating motivated, active learners. Nonetheless, while both techniques value interaction and teamwork, there are still key differences. In collaborative learning, students make discrete progress in coordination with others (George, 2017). On the contrary, cooperative learning is based on personal accountability, and therein a student's role is clearly defined. In addition, the teacher's role is vital because they become an information supplier, observer and intervener when necessary. As 21st-century skills are based on the idea of interaction and exchange of ideas, teachers should create skilled citizens equipped with abilities that can support them in their social, educational and professional life.

In online classes, cooperative learning tasks are often disregarded as they require a lot of planning. Silalahi and Hutauruk (2020) emphasize the idea that instructors should incorporate cooperative learning tasks in their online classes to improve the quality of online courses and prepare students for life. They note that cooperative learning enhances social skills, creates active learners, boosts students' productivity and develops students' characters. Moreover, it enhances communicative, leadership and problem-solving skills. Silalahi and Hutauruk (2020) illustrate that cooperative learning can be practiced using WhatsApp and Google Classroom. However, cooperative learning online is not confined to a certain tool. Teachers can design cooperative tasks that can be adapted to any online tool.

Factors affecting cooperative learning

Group size. Group size is a defining factor in the success of cooperative learning, whether in class or online. Researchers suggest that the best group size to enhance interaction ranges from three to nine. Baloche (1998) advocates incorporating a group size of three or four students. Kagan (2015) indicates that groups of three to five are optimal for best results, as all members are obliged to work, reach common ground and accomplish the task required. The same rules concerning the number of students in cooperative tasks apply in an online environment. AbuSeileek (2012) advocates embedding cooperative learning tasks in online learning environments in which the number of cooperative tasks members range from two to five. He emphasizes the positive attitudes of students toward cooperative learning in online learning environments specifically when the number of students working on cooperative tasks is small. In addition, he asserts that online environments may motivate students to work effectively because the stress associated with face-to-face environments is elevated. In his study, AbuSeileek (2012) even blinds the identity of the students working on cooperative tasks to make them feel more at ease while working.

Level of students. Cooperative learning can also be affected by the level of the students. It may be assumed that university students have more positive attitudes toward cooperative learning than students in schools. However, previous studies find that both school and university students have positive attitudes toward cooperative learning. For example, in their study of secondary school students using cooperative learning, Abdulwahab *et al.* (2016) find that students had positive attitudes toward this learning technique. Many studies conducted at the university level (e.g. Tran, 2014) also find that students have positive attitudes toward cooperative learning.

Aghajani and Adloo (2018) point out that cooperative learning can enhance socialization, interaction, engagement and creativity. Their study on undergraduate students doing cooperative writing tasks on Telegram demonstrates the relevance of designing interesting, effective and edifying cooperative tasks to support the exchange of ideas. Aghajani and Adloo (2018) emphasize that students like cooperative work online as it helps them learn and

improve their language skills. Cooperative learning online also helps students gain the skills of self-expression, interaction and exchange of ideas. The above study enforces the idea that the skills taught and number of students interacting in a task fundamentally affect the students' perception. George (2017) examines the effect of cooperative learning tasks on university students with different learning styles. The results support the positive effect of cooperative learning on university-level students with different learning styles.

Cooperative learning and online classes. Online learning has created opportunities for language teachers and learners to use several innovative tools. Previous studies report that learning through computer-mediated collaboration leads to improvements in performance, interaction and critical thinking (Bliss and Lawrence, 2009). Collaboration in online communities not only involves students in the class but also connects them beyond the classroom (Harris, 2010). Cooperative online learning has its advantages over traditional face-to-face classrooms. However, the insight that online learning may not offer as valuable an experience as learners can gain through a traditional classroom format has been a common opinion by many instructors and administrators (Alexander *et al.*, 2009). On the other hand, many other scholars (e.g. Dhawan, 2020; Mendo-Lázaro *et al.*, 2018) believe that cooperative learning via online tools is a powerful technique in comparison to traditional classrooms. The different opinions on implementing online cooperative learning can be attributed to the fact that numerous factors are responsible for the success or failure of online cooperative learning. To date, there is a dearth of studies investigating the effect of the level of learners, setting and group size of learners on cooperative learning in online environments. Thus, the aim of the current study was to examine the factors that affect learners' attitudes toward online cooperation.

Research questions. This study seeks to answer the following research questions:

RQ1. What are students' attitudes toward cooperative learning in online learning environments?

RQ2. To what extent does the level of learners (i.e. undergraduate or postgraduate) affect their attitudes toward cooperative learning?

RQ3. To what extent does the setting where participation takes place (i.e. inside the class, outside the class or both) affect their attitudes toward cooperative learning?

RQ4. To what extent does the group size affect their attitudes toward cooperative learning?

RQ5. What is the actual use and preference of the participants for using cooperative learning?

Methods
This study is a descriptive study. It is based on a survey to determine the views of the participants toward cooperative learning strategies.

Participants
The participants in this study consisted of 50 undergraduate and postgraduate students at King Saud University, Saudi Arabia, all of whom were native Arabic speakers. The mean age of the participants was 29.22 years. They were selected from different colleges, such as Computer Science, Business Administration and Education. About 42% of the participants were studying TESOL, 26% were from the Education Department, 16% were studying Engineering, 10% were from the Computer Science Department and 6% were from the Business Administration Department. Approximately 88% were full-time students and the

remaining 12% were part-time students. In addition, 44% of the participants were undergraduates and 56% were postgraduates. Table 1 shows their demographic background. Most of the respondents (88%) stated that they have participated in a group activity/assignment in an online learning environment, while 12% stated that they have not.

Research instruments

Data were collected using an online survey developed by the authors based on the topics discussed in the review of literature (Appendix). The first section of the survey was about the participants' background (gender, age, major, university level and type of study). Section 2 asked if they participated in group activities/assignments in an online learning environment. They were likewise asked about the place where they participated (i.e. inside the class, outside the class or in both settings) and the size of the groups they participated in. Section 3 was about their attitudes toward cooperative learning in online environments. It contained 11 statements, and the participants were asked to rate their attitudes according to a five-item Likert-type scale ranging from *strongly agree (1)* to *strongly disagree (5)*. Section 4 was composed of open-ended questions asking the respondents to state their preference for group size and if they preferred individual work rather than working in a group. Furthermore, they were asked to mention the courses in which they believe greater learning could be achieved via cooperative learning activities.

Validity and reliability of the research instrument

The survey was carefully designed to ascertain the validity of the instrument. It was sent to a panel of three professors in Applied Linguistics. It was approved with some suggestions and modifications before the final version was circulated. Its Cronbach's alpha was found to be reliable ($p = 0.811$) as shown in Table 2.

The data collection process lasted for about one month (i.e. from February 2 to March 3, 2019). The data were exported from Google Forms and then analyzed by using the SPSS software package (version 22).

Category		N	$\%$
Gender	Male	9	18.0
	Female	41	82.0
Age	Under 20	7	14.0
	20–25	11	22.0
	26–30	13	26.0
	31–35	16	32.0
	Above 35	3	6.0
Area of study	TESOL	21	42.0
	Computer Science	5	10.0
	Business Administration	3	6.0
	Engineering	8	16.0
	Education	13	26.0
Fulltime or part-time	Full-time	44	88.0
	Part-time	6	12.0
Level of Learner	Undergraduate	22	44.0
	Postgraduate	28	56.0
Have you participated in online group activities?	Yes	44	88.0
	No	6	12.0
Source(s): Authors own work			

Table 1.
Respondents'
background

Data analysis
The research questions were tested by two different analyses. The first one was a descriptive statistical technique, where the data were analyzed and presented using the frequency, mean and standard deviation (SD) of the items. The second one was an analysis of variance (ANOVA) test. An ANOVA was applied with the independent variables of more than two groups (e.g. age, education level and group size) to compare their responses to the survey items.

Results and discussion
To determine the participants' view on cooperative learning in online learning environments, an analysis of the frequency and mean of each item in the survey was computed.

(1) What are students' attitudes toward cooperative learning in online learning environments?

To explore the students' attitudes toward cooperative learning in online learning environments, the survey statements were analyzed as shown in Table 3.

Table 3 shows that more than 64% of the participants agree or strongly agree that they achieve more when they work in a group. About 82% liked participating in cooperative learning tasks, and 84% felt that cooperative learning can improve their attitudes toward the syllabus. Almost all the participants (92%) thought that cooperative learning helps them to interact with others in language learning. Additionally, about 88% felt that cooperative learning enhances cooperation among students. About 90% of the participants felt that

Cronbach's Alpha	Cronbach's alpha based on standardized items	N of items
0.811	0.785	20

Table 2. Reliability statistics
Source(s): Authors own work

Statements	S.A.	Agree	Neutral	Disagree	S.D.	Mean
1. I achieve more when I work in a group	32%	32%	28%	6%	2%	2.14
2. I like participating in cooperative learning tasks	48%	34%	16%	2%	0	1.720
3. Cooperative learning can improve my attitudes toward the syllabus	28%	56%	10%	2%	4%	1.98
4. Cooperative learning helps me to interact	56%	36%	4%	2%	2%	1.58
5. Cooperative learning enhances cooperation among students	52%	36%	8%	4%	0	1.64
6. Cooperative learning enhances students' participation	42%	48%	8%	2%	0	1.70
7. Cooperative learning enhances critical thinking and facilitates creativity in the group setting	48%	32%	18%	2%	0	1.74
8. Cooperative learning makes the learning experience better	24%	52%	22%	0	2%	2.04
9. Cooperative learning increases your participation in the online environment	16%	84%	0	0	0	1.98
10. Cooperative learning fosters good working values among students	36%	52%	6%	6%	0	1.84
11. Students who work together learn and understand more than when they work individually	34%	54%	8%	4%	0	1.82

Note(s): S.A. = Strongly Agree; S.D. = Strongly Disagree
Source(s): Authors own work

Table 3. Percentage of participants' responses to the survey

cooperative learning enhances students' participation, and nearly 80% thought that cooperative learning enhances critical thinking and facilitates creativity in the group setting. Moreover, about 76% of the participants felt that cooperative learning makes the learning experience better. Interestingly, all the participants felt that cooperative learning increases their participation in the online environment. About 88% felt that cooperative learning fosters good working values among students. Similarly, 88% of the participants felt that students who work together learn and understand more than when they work individually.

The first research question is about the students' attitudes toward cooperative learning in online learning environments. The results indicated that the participants felt that they achieve more when they work in a group and that most of them liked participating in cooperative learning tasks. Almost all the participants thought that cooperative learning helps them to interact with others in language learning and enhances their participation. Moreover, according to the participants' view, cooperative learning enhances critical thinking and facilitates creativity in the group setting. They also felt that cooperative learning fosters good working values among students. The results of this study are in line with Abdulwahab *et al.* (2016) and Tran (2014), where learners were found to have positive attitudes toward cooperative learning.

(2)   To what extent does the level of learners (i.e. undergraduate or postgraduate) affect their attitudes toward cooperative learning?

To explore if the level of the participants had any effect on their attitudes toward cooperative learning in online environments, a comparison was made between undergraduate and postgraduate students. This comparison is shown in Table 4.

Table 4 shows no significant difference in the means of undergraduates and postgraduates regarding the use of cooperative learning in online environments.

(3)   To what extent does the setting where participation takes place (i.e. inside the class, outside the class or both) affect their attitudes toward cooperative learning?

The third research question is about the effect of setting (i.e. inside the class, outside the class or both). To answer this question, the survey included some sentences to explore this issue. The students were asked if they ever participated in group activities/assignments and where they did it. Their answers to this question are shown in Table 5.

Table 5 shows that about 52% of the students participated in cooperative learning in both settings (i.e. inside and outside the classroom), while only 26% and 22% did so inside and outside the classroom, respectively. The results of this study showed that most of the

Category	N	Mean	Std. deviation	Std. error mean	Sig
Undergraduate	22	1.9394	0.56764	0.12102	0.959
Postgraduate	28	1.7500	0.51370	0.09708	
Source(s): Authors own work					

Table 4.
Level of learners and their attitudes toward cooperative learning in online environments

		Frequency	Percentage
Setting of participation	Inside the class	13	26.0
	Outside the class	11	22.0
	Both	26	52.0
Source(s): Authors own work			

Table 5.
Setting

participants found no difference between using cooperative learning inside the classroom and using it outside the classroom.

(4) To what extent does the group size affect their attitudes toward cooperative learning?

To explore the effect of group size, the students were asked about the number of group members they actually participated in their courses. The results are shown in Table 6.

Regarding the group size, about 52% of the students reported that they participated in groups composed of 5–7 members, 28% participated in small groups composed of 2–4 members and only 20% participated in large groups of 8–10 members.

The students' attitudes toward group size were measured as well. They were asked whether they prefer being assigned to small (4 or less members) groups or large (7 or more members) ones. Their answers were categorized and combined as shown in Table 7.

As shown in Table 7, the majority of the participants (71.42%) preferred small groups. A few of their reasons for selecting small groups is that they think everyone can participate in small groups and be given the chance to be more creative, cooperative and understanding. The result obtained here is in line with that of AbuSeileek (2012), who reports that students have positive attitudes toward cooperative learning in online learning environments when the number of students working on cooperative tasks is small.

(5) What is the actual use and preference of the participants for using cooperative learning?

To verify the participants' preference for group work, they were asked if they prefer individual work rather than working in a group. Their answers were combined and shown in Table 8.

		Frequency	Percentage
Number of Members in the Group	2–4	14	28.0
	5–7	26	52.0
	8–10	10	20.0

Table 6.
Group size

Source(s): Authors own work

Group size	Number and percentage	Reasons
Small	25 (71.42%)	- It helps make every one work and participate - It gives me the chance to be more creative, cooperative, and understanding - We can share our thoughts and opinions easily - It is easier to split tasks and track progress - It is easy to divide the work and less disagreement occurs among members - It helps me stay focused
Large	9 (25%)	- It facilitates the division of tasks and reduces them as well - There is better collaboration and sharing of ideas - The different characteristics and thoughts of students are going to benefit the learning environment - The tasks will be achieved quickly, and students will get the best outcomes from the learning process by cooperating together - With a greater number of members, less work is done
Not decided	1 (2.7%)	- It depends. If I know the people, the number wouldn't matter

Table 7.
Students' preference of group size

Source(s): Authors own work

Preference	Number and percentage	Reasons
In group	22 (57.89%)	- It helps us participate in our lives, collaborate, and understand a lot in our lives - It is more cooperative and much more exciting than individual work - It can open my eyes to other opinions and help me see a topic from other perspectives. Also, the workload will be lessened when you are in a group - It makes the task easier and takes less time and effort; at the same time, we all gain the same amount of information
Individual	10 (26.31%)	- I can make sure that there is nothing wrong - I personally can't understand how others can share ideas without being misunderstood - I can accomplish my tasks and work at my own pace - It is easier to control and ideas are more connected than when distributed among a group - I have to make a decision and decide on what to do
Both/ neutral	6 (15.78%)	- It depends on the task. Sometimes if the activity we are doing is difficult and needs a long time, it is better to work in a group, and vice versa

Source(s): Authors own work

As shown in Table 8, the majority of the participants (57.89%) preferred working in groups. Some of their reasons for preferring to work in groups include believing that it can help them participate in their lives, collaborate and understand a lot in their lives. They also reported that working in groups was much more exciting than individual work. It can open their eyes to other opinions and help them see the topics from other perspectives. Also, they thought workload will be lessened when they are working in groups. In addition, they felt that working in groups made the task easier and took less time and effort. On the other hand, about 26% of the participants preferred working individually. They give their reasons for this preference. They thought that they cannot understand how others can share ideas without being misunderstood. They believed that they could accomplish their work alone and they can work at their pace. Also, they thought it is easier to control and ideas are more connected than when distributed among a group.

Conclusion
This study aimed to examine the factors that affect learners' attitudes toward online cooperation. The findings indicated that the participants feel they achieve more when they work in a group and that most of them like participating in cooperative learning tasks. Furthermore, almost all the participants think that cooperative learning helps them to interact with others in language learning and enhances their participation. According to the participants, cooperative learning enhances their critical thinking and facilitates creativity in the group setting. In addition, the study found no significant difference in the means of undergraduates and postgraduates regarding the use of cooperative learning in online environments. The results also showed that most of the participants find no difference between using cooperative learning inside the classroom and using it outside the classroom. Likewise, the majority of the participants prefer small groups, as they feel that everyone can participate actively in such groups.

Study implications
On the basis of the study results, some pedagogical implications are drawn in this study. First, some students are unfamiliar with online group work and may need some training classes and an assurance that it is a valuable learning experience. Students who are unfamiliar with

cooperative learning need to be involved in cooperative learning activities. Second, teachers should make cooperative—not competitive—activities in the classroom so that students will be more motivated to participate in these activities. Third, small groups can be used more. However, some other types of grouping should be used, such as pair work and large groups.

Limitations of the study

The sample size used was small and, consequently, generalizations could not be made. The length of the study was short as it was only 10 weeks during one semester. This period did not allow this study to make a detailed evaluation of the incorporation of cooperative learning tasks in online classes. Further studies can be conducted with a larger sample of participants. In addition, future studies can utilize different data collection tools, such as observation.

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Appendix
Students' Survey*

Section I:

1. Age: □Under 20 □20 − 25, □26–30, □31–35, □Over 35
2. Gender: □Male □Female
3. What is your area of study? □Part Time □Full Time
4. Undergraduate or Post-graduate

Section II:

5. Have you ever participated in a group activity/assignment in an online learning environment? □Yes □No
6. If you ever participated in group activities/assignments, where did you do it? (In class, Outside of class, both)
7. What has been the size of your group? 2 – 4, 5 – 7 , 8 – 10, if more, please specify __

Section III

Read the following and indicate your level of agreement or disagreement with the statements.

Survey Key (SA = Strongly Agree, A = Agree, N = Neutral, D =Disagree, SD = Strongly Disagree).

No.	The statement
8.	I achieve more when I work in a group.
9.	I like participating in cooperative learning tasks.
10.	Cooperative learning can improve my attitude towards the syllabus.
11.	Cooperative learning helps me to interact.
12	Cooperative learning enhances cooperation among students.
13.	Cooperative learning enhances students' participation.
14.	Cooperative learning enhances critical thinking and creativity is facilitated in the group setting.
15.	Cooperative learning improves the learning experience better.
16	Cooperative learning increases your participation in the online environment.
17	Cooperative learning fosters good working values among students.
18	Students who work together learn and understand more than when they work individually.

19-- Rate the extent to which lecturers use group activities in online environments □Never □Sometimes □Always

Section IV

Please read the following items and answer accordingly.

20-- Do you prefer being assigned in small (4 or less persons) groups or large (7 or more persons)? Explain.

21-- Do you prefer individual work rather than working in a group? If so Why?

22-- Would you prefer if your lecturers used more group activities/assignments in online learning environments? Please give reasons for your answer.

23- Name the course/courses in which you believe greater learning could be achieved via cooperative learning activities.

24- Do lecturers give clear guidelines for the completion of group activities/assignments in the online learning activities? If yes, do these guidelines make the task clear and enhance completing the assignment in the specified time?

25-- Would you be more comfortable if more cooperative learning activities were incorporated in your course of study online? Give a reason for your answer.

26-- How familiar are you with cooperative learning? Have you tried it online before?

27-- Rate the extent to which your teachers use group activities. □ Never □ Sometimes □Always

**Source(s): ***Authors own work. Adapted from different surveys

About the authors
Dr Hind Abdulaziz Al Fadda is an associate professor in the field of teaching English as a second
language at the department of curriculum and instruction at king Saud University – Riyadh. She earned
her M.A and PhD in TESOL from Kansas State University, USA. She has several published research in
the field of CALL and several contributions in educational conferences.

Dr Rasha Osman Abdel Haliem is an English language and literature assistant professor at the
Higher Technological Institute, Egypt. She is a certified teacher from University of Oregon and
Cambridge TESOL and avid researcher who presented in many national and international conferences.

Dr Hassan Saleh Mahdi is an assistant professor of Applied Linguistics at Hodeidah University,
Hodeida, Yemen. His research interests are computer-assisted language learning (CALL), Mobile-
assisted language learning (MALL), second language vocabulary acquisition. He has published several
articles related to these topics. Hassan Saleh Mahdi is the corresponding author and can be contacted at:
almatari7@gmail.com

Dr Reem Alkhammash is an associate professor of linguistics at Taif University. She also the
Director of the English Language Centre. Her work published in reputable journals such as Discourse &
Communication and other international peer-reviewed journals. She also has broad interests in second
language acquisition, classroom interaction and instruction in ESL/EFL settings and teacher
professional development.