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Improving Students' Speaking Performance and Communication Engagement through Technology-Mediated Pedagogical Approach

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Online teaching tools are effective means to engage students in online learning and thus, have been becoming increasingly popular in different educational settings. However, there is yet an increasing attention to implement these online teaching tools within a pedagogical method for a more engaging and effective learning. This paper is set out to explore the impact of FlipGrid application (henceforth, FlipGrid app) within metacognitive approach on students' speaking achievement and communication engagement. An exploratory case study using mixed-method research involving a one-group pre- and post-test design was employed in the study. A group of 29 Thai EFL first year college students was purposively selected as samples. A FlipGrid scaffold support table was also used to aid students on their speaking performance. Furthermore, a questionnaire on students' communication engagement was administered to assess the students' levels of communication engagement towards their peers and their teacher using the application. Quantitative findings reveal that students' speaking presentation performance in terms of the four speaking components such as clarity, content, delivery, and fluency and coherence, was improved. Moreover, majority of the participants agreed to the helpful affordances of FlipGrid app as their communicative engagement with their peers was enhanced. Qualitative results also revealed that the participants have positively welcomed the use of FlipGrid app in improving their speaking skill and communication engagement. Finally, the study findings offer considerable insights into utilizing FlipGrid app within a metacognitive approach to improve students' speaking performance, enhance their communication engagement, and transform language learning classroom in a modern technology-based environment especially in this time of pandemic.

Keywords: communication engagement, FlipGrid application, metacognitive approach, speaking performance, technology-mediated pedagogical approach

INTRODUCTION

Teaching online has been an emerging challenge for the majority of online teachers and lecturers. One of the challenges is that some instructors feel concerned about the effectiveness of online classes on learners' learning outcomes. Furthermore, online teachers have been struggling about which technological tool can be effectively utilized

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to help them assess students' communication and active engagement towards the subject they are studying. The communication involving in a usual classroom is, in fact, not as natural for many online learners and this places stress on keeping the communication and/or interaction that is required in learning. One example is the "Zoom" - an online platform, which has been presently utilized by schools and universities in many countries where teachers can carry out their classes and students can interact with their peers and teachers; however, studies have revealed that passive students would rarely ever share their knowledge and rarely speak to query during online class (Dietrich et al., 2020). Furthermore, they reported that using Zoom platform alone to support engagements between students and teachers would not work well for students who are passive and taciturn.

In Thai educational context, Thai students can be described as having these general characteristics - silent, shy, and passive students- which make it difficult to see evidence of learning if teachers evaluate them based on their speaking performance and verbal interaction. In fact, in Thai culture, students have been taught to not question authority figures because for them it shows impoliteness towards their teachers (Robillos & Phantharakphong, 2020) and of course, finishing the class without understanding something would be very embarrassing and time wasting. Furthermore, these students are not speaking enough and thus, showing a lack of engagement when it comes to academic discussions. As far as online class is concerned, many Thai students will go throughout the whole school day without even saying a word to anyone such as to their classmates, peers, as well as to their teachers (Worasatepongsa & Chordkunpan, 2021). This shows how hard it is for teachers to make speaking assessments online when all they need is to observe engagement through verbal interactions and communications germane to teaching and learning objectives.

Active learning means involving more than just speaking skill from students as well as engaging them in class discussions (Bonwell & Eison, 1992). Many teachers want the same level of students' engagement in an online learning setting. As a teacher, it can be very challenging to get students to demonstrate their knowledge and skills if engagement is not present. Students' engagement is not as simple as student participation where teachers hear single word answers and phrases from students but it involves discussion that requires higher thinking levels (Fleming, 2018) and depths of knowledge creating connections with a topic from their thoughts, opinions, and views. This ability manifests that students try to make meaningful sense in connection to their background knowledge and experiences. This kind of environment, where interaction and engagement are present, provides the opportunity for students to be active communicators with each other. Research has shown that most schools today, have goals to support engagement to make learning as inclusive to all groups of students when it comes to communication (Amirulloh, Damayanti, & Citraningrum, 2020; Barlett, 2018; Edwards & Lane, 2021) and EFL learners are not exception to this group.

In online learning, every teacher would hope that students can achieve high engagement (Barlett, 2018). Students need to be connected to all of the variables in order to display any sort of engagement in the classroom. Connectedness with these variables ensures

that students can have a sense of purpose to their learning with others, of themselves, and the outside world (Barlett, 2018). Furthermore, interactions and engagement in online learning classes can be successful when it enhances conversations about the topic. The interaction between the learners and their peers as well as their teachers have been becoming more increasingly common since it was advocated by the educators in the field of EFL as 21st-century social learning practices in the classroom. Bandura (1977) highlighted that discussions, interaction with peers, and meaningful exchange with the social community can foster learning and engagement.

However, Angelino, Williams and Natvig (2007) argued that without finding ways to keep students engaged in a setting of online learning, the percentage of students' passivity and disengagement to learning will increase throughout the school year. Therefore, finding a technological solution to solve these challenges might help promote learners' speaking skill and active communication engagement whether off or online. The present study attempts to use a free online application from Microsoft called FlipGrid (henceforth, FlipGrid app) which has been becoming so popular to students especially in helping them to be engaged and motivated in their learning processes. However, this technological solution should not only be utilized unaided with a strategic pedagogical approach because when students are taught of using technology within a strategic approach such as metacognitive approach, students may be able to know how to plan, monitor, and evaluate what they do (Flavell, 1979; O'Malley & Chamot, 1990; Robillos, 2019; Robillos & Bustos, 2022). The strategic pedagogical approach has been proved to increase control, enhance confidence, and augment learning proficiency to learners. Thus, learners take on more responsibilities for their learning (Robillos, 2019; 2020; Robillos & Bustos, 2022) which is a pre-requisite for critical thinking (Flavell, 1979, Robillos & Phantharakphong, 2020; Robillos, 2022) and is often considered as one core objective of higher education (Al-Mahrooqi & Denman, 2020; Robillos, 2022). Thus, the current study attempts to examine whether using FlipGrid within metacognitive approach improves the learners' speaking performance and communication engagement, where no studies to date have been conducted in the Thai EFL context.

Literature Review

Affordances of FlipGrid app and its merits to speaking performance and communication engagement

FlipGrid is a free online platform from Microsoft which has been becoming so popular to both teachers and students. Teachers can be able to hold their classes into grids - one important feature of FlipGrid app, which allows students to be separated into sections (Green & Green, 2018). A grid is a community of learners in which the teacher can label the grid and use an auto-generated code or create a custom Flip Code. The topics are discussion prompts and students can respond to the topics. Then responses are video recorded and uploaded by the students as their responses on the posted topics so that they can share their ideas through their voices. The replies in the FlipGrid app enable the students to make an interactive discussion in which they can reply to the previous responses that are added to the topic (Budiarta & Santosa, 2020; Fahey et al., 2019).

Furthermore, FlipGrid app provides an opportunity for students to do online face-to-face interaction and also facilitates students to do virtual discussion that allows them to communicate and intermingle with their virtual peers (Budiarta & Santosa, 2020). Bartlett (2018) underscored that the ease of use in technology has been proven to support engagement and this technological feature is a very important aspect for students for them to be able to sustain and manage learning through online interactions.

Previous studies suggest that FlipGrid appears to be beneficial for engaging and encouraging students within an online learning community and appear to be useful for EFL speaking classes. Numerous studies have investigated the efficacy of FlipGrid app to learning (*e.g.*, Fahey et al., 2019; Flanagan, 2019; McClure & McAndrews, 2016). FlipGrid was recognized as a low-stakes platform that aid students enhance their public speaking skills (McClure & McAndrews, 2016). FlipGrid helps to bring more Universal Design for Learning (UDL) into the classroom by engaging learners to verbal discussions, apart from text-based discussions (Flanagan, 2019). A group of scholars emphasized that using FlipGrid app is not only about recording videos; it is about learning that involves oneself and outside sources such as peers and teachers which could happen anywhere and anytime; thus, focusing on making connections (Fahey et al., 2019). Additionally, FlipGrid promotes that everyone can be a teacher as well as a learner. FlipGrid app can create an EFL learning atmosphere that makes students participate, engage, and enjoy the class. Interestingly, FlipGrid app helps unconfident students to convey their ideas in face-to-face interaction to perform really well in responding to the topic of FlipGrid discussion (Flanagan, 2019). They might as well express more effectively when they themselves record their video responses on the grid discussion.

Speaking presentation skills, on the other hand, are vital for learners as well as teachers. FlipGrid app offers great chances to fortify speaking presentation (Miskam & Saidalvi, 2019). Green et al. (2021) emphasize that using FlipGrid app permits teachers to link theory and application where students can complete tasks, analyse them along with their peers and their teacher, and reflect on their own performances and experiences, meaning, enhances both speaking performances and communication engagement. In the study conducted by Petersen et al. (2020), they integrated the use of FlipGrid app because of its easy-to-use feature within smartphones. Particularly, students commended the affordances of the tool especially when conducting speaking activities, making responses and giving feedbacks to queries, and knowing language more deeply. Congruently, Mango (2019) surveyed learners' perceptions on the use of FlipGrid app as a tool for language learning and improvement. Results revealed that learners' confidence in speaking as well as listening was improved and positive thoughts towards communication engagement were enhanced. The current study also seeks to expand this line of research by investigating the relationship between learners' speaking performance and communication engagement using FlipGrid app within metacognitive approach where no studies, to date, has yet been conducted.

As emphasized by Basko and McCabe (2018) "…FlipGrid app can maintain students' persistence rates during the teaching-learning process". Moreover, the media can also

create a cognitive, social, and teaching presence (Holbeck & Hartman, 2018). They (Holbeck & Hartman) also added that the use of FlipGrid app could accommodate online face-to-face interaction instead of traditional face-to-face classroom interaction. Furthermore, Petersen et al. (2020) conducted a small-scale study using first year ESL students in a Japanese university. The study informed innovative ways to improve communicative English engagement in a university level. Data collection methods consisted of teacher observations, video data and student responses recorded via a questionnaire. They reported that the use of FlipGrid app on student smartphones as a method of completing speaking activities can promote successful results in learning. Since the study findings indicate that the students felt comfortable with the lesson framework and how well lesson procedures were demonstrated and carried out and that language aims and objectives were successfully completed in class work and outside of class, the results have given them a "proof of concept" so that they could justify the continuation of the study and thus, the design of the study can be established.

Metacognitive Approach to EFL learning

Technology has been widely used in educational environments, facilitating learning and teaching. The integration of technology in instruction challenges teachers to know what and how they use technology (Hubbard & Levy, 2006; Mishra & Koehler, 2006). This integration needs to be guided by pedagogical principles that assist teachers in designing instructional strategies to facilitate learning of the content, in-depth knowledge of the concepts, and identifying the unique affordances that technology provide for the subject matter (Mishra & Koehler, 2006). In second language (L2) learning, similar perspectives have been emphasized.

Previous studies have been conducted with regard to the use of technology on EFL teaching and learning, *e.g.,* improving learners' communication and speaking skills (Budiarta & Santosa, 2020; Petersen et al., 2020; McLain, 2018) fostering learners' collaboration and engagement (Barlette, 2018); enhancing learners' oral presentation skill (Miskam et al., 2019) to name a few. However, the present study does not only focus on the use of FlipGrid app to improve EFL learners' speaking performance and communication engagement but the study is delved into exploring the impact of using FlipGrid app employing metacognitive procedures that might potentially aid EFL learners to plan, monitor and evaluate their learning. When students are taught of using FlipGrid within an appropriate strategic approach such as metacognitive approach, students can know how to plan, monitor and evaluate what they want to do (Flavell, 1979; O'Malley & Chamot, 1990; Robillos, 2019; Robillos & Thongpai, 2022) where they can be able to take on more responsibilities for their learning which is necessary to enhance critical thinking (Robillos, 2020).

A burgeoning number of studies in Second Language Acquisition (SLA) proved that metacognitive approach to second language instruction provide learners the proper guidance in EFL learning (O'Malley & Chamot, 1990; Robillos, 2019; Taghizadeh, 2016). For example, the writing skill which is a complex skill to teach require a strategic approach as proposed by most of SLA researchers (Flavell, 1979; O'Malley & Chamot, 1990; Robillos & Phantharakphong, 2020). The strategic models had been

proved to enhance confidence, increase control, and proficiency to learners (Eccius-Wellman & Santana, 2020; Robillos & Bustos, 2022). Thus, teachers have to provide sufficient opportunities to act upon the set of rules that already devised and planned (Eccius-Wellman & Santana, 2020; Robillos & Phantharakphong, 2020).

Furthermore, this paper is significant in that it can offer pertinent information to those who work in the field of education especially in the field of EFL. The results of the present study might serve as a guide for EFL teachers in terms of helping them to augment their understanding of language learning from the learners' viewpoints and give them more insights into the advantage of teaching EFL lessons within metacognitive approach with technology use and thereby aid them in honing students' speaking skills and communication engagement. With the aims stated above, the present study is guided by the following research questions:

1. Does the use of FlipGrid app within metacognitive approach improve the students' speaking performance and communication engagement?
2. How do the students perceive the use of FlipGrid app within metacognitive approach in improving their speaking presentation performance and communicative engagement?
3. Is there a significant relationship between the students' speaking performance and their communication engagement after the strategy intervention was provided?
4. What experiences have the students yielded in improving their speaking performance and communication engagement after they were provided with the strategy intervention?

METHOD

Research Design

The researcher employed an exploratory case study specifically a mixed-method type of research (Creswell & Piano-Clark, 2011) aimed at implementing video-based discussion activities to be able to prepare students for engaging online tasks through FlipGrid app within a metacognitive approach employing planning, monitoring, and evaluation stages on students' speaking performance and communication engagement. It is expected that the speaking and video-discussion-based activities would help hone students' communication engagement and encourage them to practice L2 in a more commonly utilized real context setting. The intervention included monitoring the students' progress over a span of 8 weeks (8 sessions) which constituted of six sessions for the implementation of the FlipGrid app within metacognitive approach (henceforth, strategy intervention) and one session each for the administration of pre- and post-tests.

Additionally, a FlipGrid scaffolded support worksheets (Edwards & Lane, 2021) were adopted and utilized to give students language practice with the content of each topic and to provide support during the making of their video presentation. This scaffolded support worksheets consist of two sections: the first section contained a list of questions about the topics provided on them. Thereafter, they would choose at least five of their answers to focus on in their FlipGrid videos. The students, in the second section of the worksheets, will encircle the keywords of their answers to complete the support table.

These keywords would help support them when recording their videos via the app. The aim is to help students sound more natural and authentic in the FlipGrid videos since they are encouraged to create their language the moment they record their videos instead of memorizing sentences or reading from a pre-written script.

Participants

The study was conducted with a single group of 29 first year college learners (6 males and 23 females at the study-university) which was purposively selected as samples (Creswell & Plano-Clark, 2011). These Thai EFL learners are enrolled in the Foundations of Academic Listening and Speaking course which is aimed to develop their listening and speaking skills in English. Specifically, the participants must take the course to improve both of their communicative and linguistic competencies which are the focus of the academic listening and speaking programme.

Data Collection

Pre-Speaking Presentation Performance

The pre-test for the speaking task performance of the students was carried out a week before the treatment started. Prior to the making of their video speaking presentation, the students were asked to select one of the five topics provided for them and record a 5-minute long video of their speaking presentation about the topic they chose to develop. These topics were related to the lessons in their regular class. These topics were also checked by two English lecturers of the Faculty in the study-university for its cultural and cognitive appropriateness. Moreover, building their background knowledge such as question posing, brainstorming, clustering strategy were some of the activities that were carried out prior to video-recording task. These prior activities are usual activities they are undertaking in their regular online class before speaking task performance. Furthermore, the recorded videos done by the participants were corrected by two inter-raters (two English lecturers from the study-university) based from the four criteria used as the speaking presentation task scoring rubric (*see:* test marking and the scoring rubric).

Post-Speaking Presentation Performance

The speaking presentation post-test was executed a week after the strategy intervention. The participants chose one of the five topics similar to the topics provided on them during pre-speaking presentation performance. They were asked to video-record their presentation and upload it at the end of the intervention (last week/meeting). This presentation task required students to present all the content in English language with proficiency and fluency level that is to be understood by other students in class. Each student would utilize 5 minutes (at most) in presenting their topic. The content of the oral presentation included an informative presentation on the topic drawing on the sources and outline previously prepared, and an analysis of the topic using various presentation techniques for effective presentation. Here, the FlipGrid scaffolded support worksheets were utilized as they were making their presentation via the application. In addition, for the evaluation of the participants' speaking task performances, the speaking

presentation task scoring rubric which was used to score their pre-speaking task was also utilized (*see:* test marking and the scoring rubric).

Questionnaire on Students' Communication Engagement

This 15-item questionnaire, designed by the researcher himself, was used to assess the students' levels of communication engagement towards their peers, classmates and teachers during and after using FlipGrid app. To further interpret the responses of the participants, the following Likert scale and interpretation were used: 5=strongly agree; 4=somewhat agree; 3=neutral; 2=somewhat disagree; and 1=strongly disagree. The questionnaire was then checked by 2 English Lecturers for possible suggestions and comments. A pilot study was carried out to the 29 second year college students (the same program as the participants are majoring) who were not the samples of the study to to ensure the reliability of the questionnaire and to identify any potential issues with the questionnaire items. The reported reliability value was 0.83. Minor adjustments were made to the order of the questionnaire items before its final administration. This questionnaire was administered to the participants after the strategy intervention was provided on them.

Interviews

Interviews were conducted after a week of intervention programme which was aimed at collecting more details with regard to the use the FlipGrid app within metacognitive approach as well as how FlipGrid app assists them to facilitate their speaking tasks. All the participants were given informed consent forms and were clarified regarding the conduct of the interview. The interview took around 30-40 mins per interviewee.

Intervention

The present study used eighth sessions for the implementation of the intervention constituted of the following: Session 1 was used for the pre-speaking presentation task performance which happened before the intervention whilst session 8 was used for post-speaking performance and administration of communication engagement questionnaire. Sessions 2-7 were used for the implementation of the intervention programme. Table 1 presents the following sessions, metacognitive stages, and activities involved in the intervention programme:

The Intervention Programme

Session/s	Metacognitive Stages	Activities
2nd Session	Introductory Part	-Introduce FlipGrid app and discuss how to use it especially in processing their speaking tasks and speaking performances.
3rd - 5th sessions	Planning Stage	-Planning activities such as advance organization, brainstorming, schema-development were undertaken by the participants to associate their prior knowledge to the new speaking topic. Speaking topics were provided by the teacher and each student started to plan his/her thoughts. -Thereafter, they were grouped into four with five students and each student would begin to share his/her outline of ideas to the other group members. After all the members finished taking their turn sharing, the group members have to come up with one group's outline. The group outline would be then shared in front of the class for others to either give additional ideas or suggest to delete irrelevant ideas.
	Monitoring Stage	-After the group's outline is presented, the members have to meet again to modify their outline and to come up with a newly created outline responding to the feedback and suggestions given by both of their peers and teacher. -Thereafter, each student would create his own draft, switched it to their peers for additional comments and to further shape their ideas by solving some issues concerning clarity, content, and coherence. The teacher can also provide advice to groups and individuals who encountered problems during the task process/es.
	Evaluation Stage	-Each student is now given the time to record a presentation video regarding the topic they discussed together. However, they are required to use the FlipGrid scaffolded support worksheets where they are only required to use five keywords as they perform their presentation. This is to help support students when recording their videos via the application and help them sound more natural and authentic in the FlipGrid videos since they are encouraged to create their language the moment they record their videos instead of memorizing sentences or reading from a pre-written script. Thereafter, they are going to upload it through FlipGrid upload feature. -The students can now choose at least two of the recorded videos their classmates have uploaded and give comments, compliments, and suggestions to further improve the video/s they chose to comment on. Furthermore, if students could not directly give feedback via text, one FlipGrid feature is the use of emojis where they can use to respond to their friend's videos. Corrective feedback (indirect) was also provided by the instructor to further monitor students' speaking improvement. -Students self-evaluate and self-reflect their speaking performance using presentation performance checklist provided on them and have the chance to discuss to their peers how successful or unsuccessful they are, and they may share some possible strategies of doing so to deal with problems that they may encounter in the future.
6th - 7th sessions	2 more rounds of speaking performances with different sets of topics using the strategy intervention	-These last 2 sessions were other rounds of speaking task processes and performances; different topics would be developed and presented using the FlipGrid app. This is to give them ample practices using the strategy before they have the post-speaking task performance which would happen on the 8th session.

The procedures and speaking materials through the lessons were consistent and were aligned to the course material they were using in their regular class to enable students to develop familiarity and confidence of using the FlipGrid app.

Test Marking and the Scoring Rubric

To be able to evaluate the participants' speaking performance, a scoring rubric was used which constituted of four components namely: *clarity*, *content*, *delivery*, and *fluency* and *coherence*. The rubric was adopted from Brewer & Ebert-May (1998), however, slightly modified by the researcher. It then checked by the three experts for its cognitive level of appropriateness before using. A descriptive checklist of these components was prepared to standardize the evaluation of the participants' speaking performance.

Firstly, c*larity*. This refers to the presenter's well – thought out ideas and how well he/she uses a proper language. Second is the *content* which measures the presenter's appropriate level of discussion and evaluation to complete the assigned topic. Third is *delivery* which measures the presenter's effective speaking style which exhibits enthusiasm, generates interests in the audience and communicates the intended information. The fourth one is *fluency* and *coherence* which measures how well a presenter can focus on the message he wants to convey and how well his/her ideas create a logical whole. Each criterion is assigned a low-scoring response (1 point to 2 points) and higher-scoring responses (3 to 4 points).

Data Analysis

In the quantitative part, the Descriptive Statistics such as mean, frequency, percentage were calculated and presented in a tabular form. To assess the difference between students' speaking performance before and after the strategy intervention, a t-test was utilized. The Pearson-*r* was also used to find out the relationship between the use of the strategy intervention and participants' speaking performance and communication engagement. In the qualitative part, data from the semi-structured interviews were analyzed through thematic coding and analysis (Creswell & Plano-Clark, 2011). After the conduct of the semi-structured interviews, the following themes were emerged: the first theme focused on the affordances of FlipGrid app and the second theme concentrated on the benefits of FlipGrid app within metacognitive approach on students' speaking performance and communication engagement.

FINDINGS

Quantitative Analysis

Participants' Speaking Presentation Performance

As revealed from the table, the component on "content" was the most improved part as it yielded a Mean and SD scores $\bar{x}$=5.18, SD=.511after the intervention was provided to the participants; however, the component on "delivery" indicated the least improved one gaining a Mean and SD scores of $\bar{x}$=4.18, SD=.437 after the intervention. Noticeably, all of the four aforementioned speaking components significantly differ before and after using the intervention as shown in Table 2:

Table 2
Participants' pre- and post- speaking performance

Components of Speaking Task	Pre-speaking performance		Post-speaking performance		Standard Error Mean	
	Mean	SD	Mean	SD	Pre	Post
Clarity	3.11	.528	4.73	.519	.114	.089
Content	3.29	.299	5.18	.511	.051	.093
Fluency and Coherence	3.12	.443	4.65	.312	.063	.051
Delivery	3.01	.597	4.18	.437	.123	.089
Overall	3.13	0.46	4.68	0.41	.189	.176

Participants' Responses towards Communication Engagement

Table 3 presents the mean and SD scores of participants' responses towards communication engagement after the strategy intervention. It is noticeable from the table that overall result was described as "somewhat agree" yielding an overall Mean of 4.10 and S.D of 0.72. This simply means that the participants have the tendency to agree to the positive uses of FLipGrid app. To illustrate: of the 15 items, item 1, 2, and 13 revealed that the participants strongly agreed to the use of FlipGrid app gaining mean scores of 4.76 and 4.70, 4.67 respectively. This indicates that FlipGrid app helped them interact with their peers and friends, enjoyed learning about their classmates by watching their recorded videos, and feel more confident in their speaking performance and language use while discussing their answers.

Item 15 yielded the least mean score of 2.11 which is described as "somewhat disagree" indicative that that they are instead willing to share their videos to their peers with the use of the FlipGrid app. Meanwhile, the most of participants somewhat agreed to the affordances of the FlipGrid app (items 3,4,5,6,7,9,12, and 14) towards their communication engagement yielding mean scores of x=4.17, 4.08, 4.39, 4.43, 4.10, 4.17, and 4.29 respectively. Meanwhile 3 of 15 items received a "neutral" response from them, meaning, FlipGrid app made them feel connected to their teacher (item 8; x=3.72; SD=0.73), they had fun chatting and discussing with their instructor (item 10; x=3.90; SD=0.67), and they could be able to participate actively in pairs or in small-group discussion forum (item 11; x=3.91; SD=0.83).

Table 3
Mean and SD scores of participants' responses towards communication engagement questionnaire after the intervention was provided on them

Statements	Mean	SD	Interpretation
1. Using FlipGrid app helped me to interact with my classmates.	4.76	0.86	Strongly Agree
2. I enjoyed learning about my classmates by watching their videos	4.70	0.65	Strongly Agree
3. I am able to communicate with my peers by asking them questions related to their video presentations	4.17	0.70	Somewhat Agree
4. I would be interested in using FlipGrid app again in class	4.08	0.88	Somewhat Agree
5. I enjoyed creating FlipGrid videos and this inspire me to look forward making my next videos	4.39	0.76	Somewhat Agree
6. FlipGrid app allows me to collaborate with classmates and peers easily.	4.43	0.82	Somewhat Agree
7. FlipGrid app helps me to engage with the content my peers are sharing	4.10	0.82	Somewhat Agree
8. FlipGrid app makes me feel connected to my teacher.	3.72	0.73	Neutral
9. FlipGrid app makes me feel more connected to my friends and classmates.	4.12	0.74	Somewhat Agree
10. I have fun chatting and discussing with the instructor.	3.90	0.67	Neutral
11. I participate actively in pairs or in small-group discussion activities	3.91	0.83	Neutral
12. I post in the discussion forum regularly.	4.17	0.66	Somewhat Agree
13. I feel more confident in my speaking skills and language use while elaborating my answers.	4.67	0.65	Strongly Agree
14. I always keep focused on my speaking tasks.	4.29	0.70	Somewhat Agree
15. I am not interested in sharing my videos to my peers through FlipGrid app.	2.11	0.42	Somewhat Disagree
Overall	4.10	0.72	Somewhat Agree

Test of Relationship on the Participants' Speaking Performance and Communication Engagement

Overall results revealed a significant relationship between the two aforementioned variables since the t-computed value of 2.17 is higher than the t-critical value of 2.05. The result simple manifests that while the participants' speaking performance improved and dealt with their speaking presentation difficulties, so did the level of their communication engagement. Table 4 shows the results:

Table 4
Overall test of relationship between speaking performance of the participants and their communication engagement after the strategy intervention

Variables	Pearson *r*-value	*t*-computed value	*t*-critical value
Speaking Performance			
Communication Engagement	0.43	2.17	2.05

Qualitative Analysis

Theme 1: Affordances of FlipGrid app

The first theme relates to participants' opinions on the many benefits of FlipGrid app to help process their speaking tasks and constitutes the following sub-themes: easy to use; easy to share videos; easy to interact with peers; custom feedbacking.

When the interviewees were asked about their opinions regarding the FlipGrid app, they conveyed a predominantly response concerning on FlipGrid's "ease of use" which aided them to improve their speaking task performance. Some participants felt that the app was easy to use and that using it to communicate with their classmates was fun and entertaining. One participant expressed his feelings regarding the FlipGrid's web browser as *"not that difficult to log in" (P9).* The "video play" function of FlipGrid app is easy to operate. Moreover, majority of the participants conveyed their feelings about the flexibility of the app which helped them facilitate their video-recording. One participant narrated that the app is easy to use because *"the record settings are not complicated and the instructions are easy to follow" (P12).*

FlipGrid app is a helpful tool in aiding students share their recorded videos and video responses with their peers and their teachers. One participant narrated that uploading a recorded video presentation using FlipGrid is *"so simple and does not need many instructions to follow" (P6).* Additionally, when recorded video responses are shared and made accessible to every student in class, they may improve learning a language since video watching and responding enable them to be exposed to L2. One participant narrated that responding and *"reacting to recorded videos and are accessible to everyone helps expose us especially in learning a second language" (P17).*

FlipGrid app enhances students' interaction with their peers. The interview results manifested that FlipGrid app was a beneficial tool in aiding students to interact with their peers and teachers. There was a clear manifestation that when participants use the app in their video recording, it gives them a feeling of connectedness with their peers. One participant indicated that the easy use of FlipGrid app gives her a feeling of having *"a direct and face-to-face conversation with classmates even it is in an asynchronous setting" (P5)* and that it gave the participant a feeling of connectedness with peers and friends. Furthermore, since the participants could post their replies and comments toward their classmates' videos, many of them experience "*a strong feeling of relationship with peers" (P8)* and felt easier *"to have a conversation using the application" (P11).*

Another affordance of the application is "custom feedbacking". The participants have maximized the use of FlipGrid app in the aspect of feedbacking. Several participants reveal that they can immediately receive feedback to their recorded videos from their teacher because of the FlipGrid video display where *"the rubric scores and comments of my teacher is visible on the device display and enables us to facilitate it ourselves" (P3).*

Theme 2: Advantages of FlipGrid app within Metacognitive approach on students' speaking performance and communication engagement

Theme 2 constitutes of participants' accounts of the benefits they obtained from using FlipGrid app within metacognitive approach on their speaking task processes and performances. The sub-themes focused on the importance of metacognitive planning; metacognitive self-monitoring; and metacognitive self-evaluation; self-regulation.

One implementation of the strategy intervention exposes the participants to metacognitive planning to help activate their prior knowledge towards the topic before they record their speaking presentation. This could aid them to link their background information to the new topic. Advance organization coupled with brainstorming was used as one of the planning activities. This planning activity helped *"trigger their background information which could possibly link to the new topic to be done" (P14).* This technique helped participants to discover more ideas that they can associate to their speaking presentation activity.

Additionally, during task making, the participants were assisted to achieve an effective speaking presentation because they can revise or edit their work whenever they want to, before coming up with one final set of ideas to be recorded. The participants maximized the use of FlipGrid app trying to self-monitor their ideas by going back twice or thrice around. The application allowed them to go back and forth even how many times they wish. They can review their recordings before they post them since the application has unlimited recording and re-recordings feature. One participant narrated that "*Double-checking helps me to monitor my accomplishments and check whether all the information is already correct or not yet" (P6).* Self-monitoring helps learners notice things about their own performance that they weren't aware of before. A participant said that *"monitoring every part of the information helped me understand more of the information which can be helpful to associate to the main idea" (P11)*. Furthermore, the participants mentioned that the FlipGrid app within a metacognitive approach afforded performance monitoring. They were able to identify their own strengths and weaknesses for improvement while recording their answers to the tasks. One participant narrated, *"the FlipGrid app enables me to see and hear myself speak and that I could know what I can do to improve more to be better." (P1).* This is supported by another participant saying, *"I can video record myself and I can correct myself when I checked it" (P2)*.

Presenters must learn how to evaluate their own language: evaluating whether there is an information needed to be added or deleted. Before recording their speaking presentation, the implementation of the strategy intervention does not only aid the participants to record their ideas to be presented but also allows them to share their ideas

to their peers and to their teacher to shape the information they would be using during the task. One participant conveyed, *"I was able to monitor my grammar in my speaking presentation" (P6).* Furthermore, the revising and editing checklists was also used to aid participants to evaluate the speech content whether their ideas are already complete or not yet. One participant narrated, *"my speaking ability has improved. I paid more attention on the use of grammar due to the helpful suggestions of peers during sharing activities" (P19).*

After FlipGrid app within metacognitive approach was implemented to the participants, they tend to achieve successful speaking performance and improve their self-regulation. The participants were exposed to use the different metacognitive stages such as planning, monitoring and evaluation in processing their speaking presentation and this made them know how to manage such presentation difficulties when they studied on their own: One participant conveyed, *"I learnt to self-regulate my speaking task processes and could perform better. If difficulties would be encountered, I think I can confidently manage to overcome them myself." (P18)*.

Evaluating one's accomplishments whether those are ideas and comments, or not, makes the participants more driven to continue putting their best effort to get on to the right track. Evaluation helps learners trace their performance (Robillos, 2021). One participant narrated, *"outlining my ideas aided me to trace my performance, it helped me to know whether I still need to add more ideas or delete unrelated ones. This technique motivates me to finish what I have begun" (P9).* Other participants describe examples of using FlipGrid app within metacognitive approach that they were able to reflect their own accomplishments whether they successfully or unsuccessfully understood the topic, whether they used effective or ineffective strategies. One participant thought, *"after getting the responses from my peers with regard to my video, I self-evaluate first by weighing the views they suggested to my video." (P15);* Other participant conveyed how evaluation strategies helped her, *"the evaluation strategies helped me evaluate and reflect my own accomplishments whether I would utilize these evaluation strategies again the next speaking task activity" (R12).*

DISCUSSION

The present study was mainly intended to investigate the effect of using FlipGrid app within a metacognitive approach on university students' speaking task performance and communication engagement. The result reported that all participants liked using FlipGrid app and found it very helpful in making video-based asynchronous discussions. They demonstrated significant gains especially on their speaking performance and communication engagement as they have generated a far deeper analysis and critical responses among their classmates and peers' speaking task performances. Moreover, the participants feel like they are in a face-to-face discussion as they were able to see and hear their classmates as they share their presentation and their peers' responses to their videos. Gurjar (2020) suggests that if learners are able to communicate and interact better with each other, they can eventually establish a stronger sense of classroom community, which can help them persist and be more effective in their online courses. The result is in congruence with other research studies focused on using video-based

asynchronous discussions (Budiarta & Santosa, 2020; Fahey et al., 2019; Flanagan, 2019; Lowenthal & Moore, 2020; McClure & McAndrews, 2016).

Furthermore, study findings unfold that the use of FlipGrid app has aided participants to improve their speaking task performance (results aligned to Amirulloh et al., 2020; Budiarta & Santosa, 2020; Edwards & Lane, 2021; McLain, 2018), heighten their peer connection (results congruent to Lowenthal & Moore, 2020), and enhance their communication engagement (aligned results with Barlett, 2018; Edwards & Lane, 2021; Petersen et al., 2020). Although, majority of the participants in the present study reported how easy the FlipGrid app is used which are also aligned to those of other studies who utilized the app being reported (Amirulloh et al., 2020; Barlett, 2018; Budiarta & Santosa, 2020; Edwards & Lane, 2021), there were also few of them expressing unease and uncomfortable with being recorded (Lowenthal & Moore, 2020).

Many students feel alone and disengaged when learning online (Kaufmann & Vallade, 2020). These students feel that they miss the interactions they traditionally do onsite. These feelings can be worsened during text-based discussions commonly found in asynchronous discussion forums (Lowenthal & Moore, 2020). However, research suggest that video-based discussions – one feature that is present in FlipGrid app, can possibly lighten some of these feelings (Edwards & Lane, 2021). The FlipGrid's video-based discussions enable the students to feel more involved and connected with their classmates and teacher/s because they can be able to see and hear one another. Moreover, the silent and taciturn students were exposed to practice speaking and were able to share their ideas eventually. Apart from that, silent students can be able to gain benefits from the examples of different ways of responding critically to the ideas of their other classmates. In the present study, the participants record and post initial video according to the prompt. Then they watch the initial post and on the smaller round thumbnails, they can watch the responses. These FlipGrid features enhance the participants a sense of connectedness with their peers as they were able to see their classmates' facial expressions, body language, and tone of voice. This result is in congruence with the study findings conducted by Barlett (2018) and Gurjar (2020). The former claim that FlipGrid' video style discussion forum aids learners to know more about their classmates as well as increases communication efficiency by showing body language and the like. The latter, on the other hand, reported that the use of FlipGrid video-based discussions allowed students to develop the types of peer connections and social presence.

It is also worth pointing out that by having EFL learners record their videos themselves using the app, they might be able to improve their speaking skills as they are required to express, reflect, and practice in English. *i.e.*, the activities make them interact with each other on the recorded videos and responding videos may help increase their time of learning especially their speaking time. However, one speaking component (*delivery*) found to be the least improved component. This indicates that participants failed to show effective speaking style that exhibits enthusiasm and interests in the audience. This might be due to the fact that they did not have any chance to deliver their topic in front of their peers and friends in real time, instead they only sit down in front of their

computer screens video-record their presentation performance and be watched by their peers asynchronously. They also produce a recorded video that were lack of vocal and facial expressiveness toward their audience since they do not have the audience watching them. Consequently, they were not able to sound expressive and to be perceived by the audience natural.

It is notable to point out, however, that not all participants were effectively aided by the FlipGrid scaffolded support table during their speaking performance. Although the scaffolded support table aided the participants to remember the keyword/s they were about to discuss, they reported that it sometimes hindered them to complete a train of thought (*i.e.* mind blanking) because they could not be able to elaborate the keyword by just looking at the keyword. They still need an outline with main idea, sub-details written in sentences. For them, speakers must outline their talks because preparing outlines encourages both 'invention' and 'arrangement'. They added that outlining is a method of constructing and organizing their ideas in a sequential manner and thoughtful flow. The finding of the present study is in contrast to the study conducted by Edwards & Lane (2021) reporting that the students were very positive about the use of scaffolded support table in completing their video tasks as it aided them to do the task easier, helped them remember ideas which eventually improved their language skills, focused on communication rather than performance. Thai university students have been used into writing their full-sentence outline prior to speaking presentation because through outlining, they can be able to glance very easily at the main point (thesis), establish the order of points, and clarify the relationship of the major and minor points.

Finally, the present study implemented the use of FlipGrid app involving three stages such as metacognitive planning, metacognitive monitoring and metacognitive evaluation. With these stages, the students were guided to collaborate and interact together as they plan, monitor their performance and evaluate their work for future endeavors. Further, the study findings showed that using FlipGrid app within metacognitive approach enhances the learners' interests for accomplishing speaking tasks, managing their own learning, and involving themselves to active, confident, and constructive procedures.

CONCLUSION

The implementation of FlipGrid app within metacognitive approach to improve the participants' speaking performance and communication engagement has yielded significant gains as the 29 freshman university students who were chosen as the samples thought that the strategy intervention implemented on them was a modern technological-based pedagogical method that would be well-appropriate for the 21st – century learners of EFL. Moreover, the students' active involvement during the teaching and learning process exposes them to practice speaking and enhances their speaking confidence as well as their learning engagement.

Further, the use of a technology-mediated pedagogical approach has significantly improved the students' speaking presentation skill. They claimed that they tend to produce clearer content, more coherent output, and more improved way of speaking

presentation. They also acknowledged that the platform was easy to use and helped them to engage more amongst their peers, classmates, and teacher/s. Additionally, the 21st century skills were also enhanced especially collaboration, communication, engagement, and critical thinking which are often considered core objective of higher education (Al-Mahrooqi & Denman, 2020; Robillos, 2022).

In addition, the participants improved their speaking performance and communication engagement indicative that the FlipGrid app within a pedagogical approach might have aided them to accomplish this. When students employ metacognitive approach in their learning, they might be enabled to know how to plan, monitor, and evaluate their learning and when they learnt how to plan and monitor a task and how to evaluate their performance, they take on more responsibilities for their learning which promotes critical thinking and fosters self-regulation. Furthermore, the integration of technology in teaching challenges teachers to know technology and how they use it (Mishra & Koehler, 2006) This technological integration needs to be guided by strategic pedagogical principles that assist teachers in designing instructional tactics to facilitate subject's content and concepts and the unique affordances that technology provide to carry out the subject matter.

SUGGESTIONS AND LIMITATION

Considering the positively-significant results of implementing FlipGrid app within metacognitive approach found in the current study result, it is suggested that the implementation of this teaching strategy should be carried out continuously especially in this time of pandemic where classes are almost held online. It is also suggested that further research needs to be carried out especially on the use of alternative pedagogical methods to further strengthen the many benefits the FlipGrid app is contributing. The intervention on the other hand, comprised of 6 sessions with 90 minutes each conducted for a single group of 29 first year college students. This means that the demographic information is limited. Thus, the treatment programme should be resampled utilizing a longer time of implementation.

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