Flip as the Asynchronous Video-Based Learning Platform in English for Specific Purposes

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Abstract - During the forced remote learning in the pandemic outbreak, asynchronous discussions based on video have some benefits which can overcome the limitations in English classroom activities especially in practicing speaking skills. However, very few studies have been done on the implementation of asynchronous video-based discussions in online English for specific purposes. Hence, this study aims to examine the effectiveness and impact of the Flip or formerly known as Flipgrid implementation for asynchronous video-based discussions on students' speaking skills. In this pre-experimental study, 55 students from the second semester of the Informatics Management study program. The quantitative data was obtained from the results of the video responses uploaded by the students before and after the implementation of Flip with a job sheet arranged based on the task chain and driving map of outcomes in outcome-based education framework. The quantitative data, that is, a data set consisting of pre-test and post-test scores, were analyzed with the SPSS 25 statistics program. The result showed that the correlation coefficient (r) of the data set in class A was 0.913, while the correlation coefficient (r) of the data set in class B was 0.874. The range of all correlation coefficients suggested that there was a strong relationship between before and after integrating Flip with the job sheet arranged based the adaptation of task chain and driving maps of outcomes. The result of the analysis with the SPSS 25 statistics program with a confidence level of 95% showed that H_1 was accepted and H_0 was rejected, which means the implementation has a significant effect on improving the student's speaking performance. Based on the answers given in the online questionnaire, students gave positive responses both in the aspect of implementation and the job sheet's content.

Keywords: Flip, task chain, driving map of outcomes, asynchronous video-based learning, speaking competence.

1. INTRODUCTION

Several studies acknowledged that during online learning, the most meaningful approach that teachers and students build connections in online courses is asynchronous text-based discussions (Guo, Chen & Hou, 2019; Serembus & Murphy, 2020). This is principally feasible as this method is adaptable and can be very practical to be implemented in online learning settings. As mentioned in (Aloni & Harrington, 2018), asynchronous discussions based on text facilitate learners to build a connection with their classmates, the lesson given in the course, and their teacher regardless of time and place constraints. Research has also demonstrated that this method can encourage reflection, build up proper involvement, and promote the advancement of the learning environment for students (Maddix, 2012), which in turn can assist diminish the sense of confinement or disconnection that is frequently experienced by online learners (Kaufmann & Vallade, 2020). Despite these advantages, text-based asynchronous communication typically has some fundamental constraints. For example, text-based asynchronous communication has been criticized as a detached experience and alienated since its inception, primarily due to the leaked clues and consequently, it is only appropriate for task-oriented communication (Lowenthal, 2010). Research recommends that students would be better to have more fruitful learning via video-based interaction as it may establish a more intense level of social presence and class community (Whiteside, 2015; Gurjar, 2020). Studies done by Serembus & Murphy (2020), Mahmoudi & Gronseth (2019), and Delmas & Moore (2019) acknowledged that discussions using video as the media can assist decrease the intensity of negative feelings experienced during online learning.

There are four common applications used today for asynchronous video-based learning, for example, VoiceThread, Flip, EdConnect, and Marcopolo (Lowenthal et al., 2020). Compared to Flip, VoiceThread got more attention in terms of research. As mentioned in Saçak & Kavun (2020), Flip and VoiceThread enable interaction and collaboration between students which is an absent feature in discussions based on text. Regarding the implementation of Flip, many positive studies highlight the use of this digital platform. This is underlined in a study in which South Korean business students reported that they felt better speaking English on video for a semester after using Flip (McLain, 2018). The use of Flip can maintain the perseverance of students throughout the teaching and learning process (Basko & Mccabe, 2018). Furthermore, Flip media can also create social and cognitive experiences in the learning process (Holbeck, R., & Hartman, 2018).

Studies to date have highlighted the positive effects of integrating the Flip digital platform into the English learning process, particularly speaking skills. The similarity between this study and the research described above is the approach of using Flip in the context of learning speaking skills. However, there is no specific research focused on the implementation of Flip, which is intended for the context of learning English for specific

purposes with the OBE job sheet, as addressed in this study. Regarding the topics used in this research, Difilippantonio Pen (2020) created speaking topics based on Bloom's taxonomy. It has a similarity with this present study as this study also designed topics in a progressive hierarchy. The main difference lies in the elaboration of topic discussion, which was designed based on task chains and a driving map of outcomes. The topics were designed in such a way that a hierarchy of competencies was created to assist students to have a continuous and gradual learning process. The driving map of outcomes is the foundation of Outcome-Based Education (OBE), a systematic approach to education and learning that focuses on the outcomes of the learning process. Therefore, the integration of the Flip digital platform with structured and performance-based topics is expected to contribute to a comprehensive and immersive learning experience for students and enhance students' speaking skills.

2. METHOD

The data collected in this study included quantitative data obtained through assignments in the form of video responses before and after the implementation of Flip using a job sheet based on a task chain approach and a driving map of outcomes. Quantitative data were taken from the pre-test and post-test results based on the pre-experimental research design. There were 55 students who participated in this study majoring in Informatics Management. Students' responses were assessed based on the oral assessment rubric, taken from the TFU foreign language assessment rubric. In addition, there was also data in the form of student perceptions in the form of descriptions obtained by completing a google form questionnaire. SPSS 25 statistics was implemented to analyze pre-test and post-test results to investigate the effect of Flip with job sheet in improving students' learning performance. The job sheet was arranged based on the framework of Outcome Based Education with the hierarchical level of difficulty illustrated in the task chain and driving map of outcomes as adapted from Du and Wang (2019). Paired sample statistics were used to determine the average of pre-test and post-test results and investigate the difference between them. Meanwhile, paired sample correlations were used to obtain the correlation coefficient (R). This step of examination was applied to figure out the impact of implementing the treatment in the learning process. Next, a paired samples test was used to analyze whether there was a contrast in students' English-speaking performance before and after the students using Flip with job sheet.

3. RESULTS AND DISCUSSION

The process of designing the themes structured in the job sheet was carried out based on the design adaptation given by (Du and Wang, 2019). The design of the theme is continuous, dynamic, and progressive, allowing students to see the process step by step. The task chain is visualized by a flowchart, called a driving map, representing the correspondence between the communication and cognitive skills that students need.


Figure 1. Task Chain on Module 3

The image above shows the task chain used as the basis for the four Flip activities. The task chain includes topics from Unit 6 (Interactions), Unit 7 (Development), and Unit 8 (IT Solutions). In Unit 6, the students were required to provide recommendations for a specific IT problem in the company. They were given a situation where businesses needed solutions to address issues related to digital interactions. In Unit 7, students were asked to write a short report to their manager describing their website design and project plan. In Unit 8 students read a scenario about a website development project. They needed to make decisions about the functionality of the website, used Gantt charts to plan the project and made suggestions about it. After completing the three unit tasks, they were given assignment to create a final video response on the theme of website launch. The previous three activities were a series of projects designed with related themes to be used as the basis for completing the final project.

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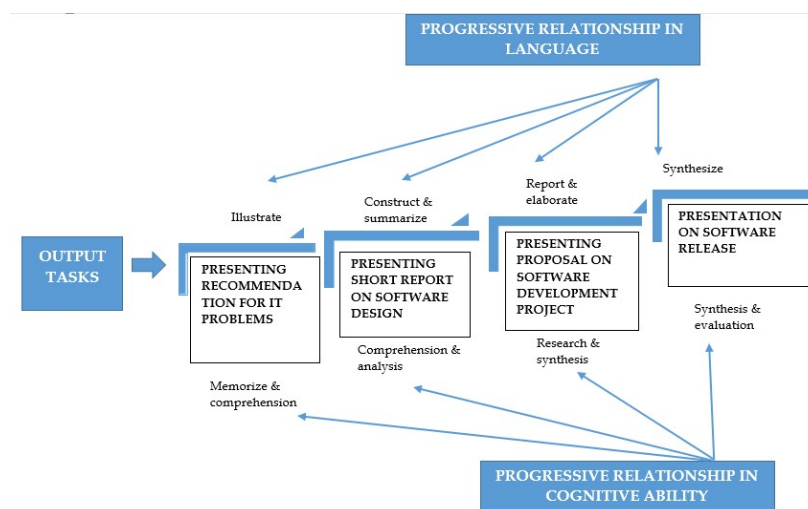
Figure 2. Driving Map of Outcomes on Module 3

The chain of attribution reflects a continuum of professionalism and learning ability to help students in completing knowledge internalization and achieve the goals of Outcome-Based Education instruction in English for Specific Purposes. In addition to the task chain, a job sheet was also created based on the resulting driving map (Figure. 2). By using the map as the main guide, the learning process continued according to the desired result. Students could also systematically progress and evaluate their learning. Task visualization is a powerful aid tool to help students build their competency framework.

Analysis of Students' Speaking Competence

Despite the forced online learning during the pandemic, educators, in general, have examined diverse methods to reconstruct the atmosphere of face-to-face interactions occurring in the classroom setting, since students' satisfaction with online learning has been mainly associated with intriguing and interactive discussions (Dyer et al.,2018; Guo et al., 2018; Mejía, 2020). In this study, the Flip application was used as the online platform to create a web of discussion based on topics in IT. The learning process was carried out in two sessions, i.e., with and without the implementation of a speaking job sheet which was arranged with progressive topics according to the task chain and the driving map of outcomes. Before the implementation using Flip with job sheet, students received materials on IT-related topics according to the syllabus introduced at the beginning of the course. Flip topics were uploaded for students to respond according to the requirements. The following figure displays a screenshot of discussion topics in Flip in the teacher's account.
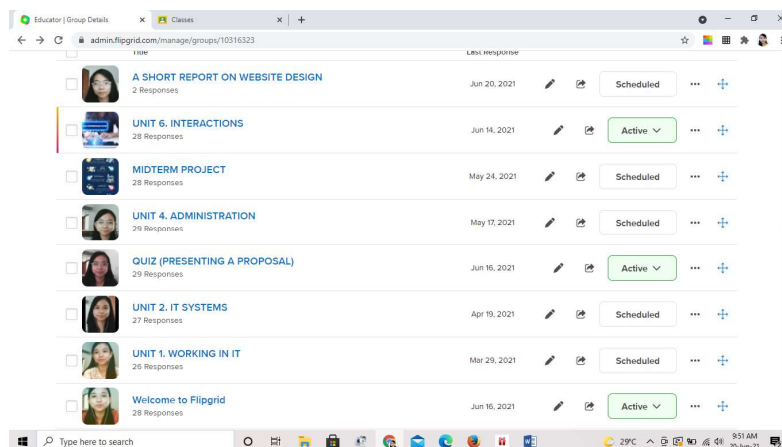

Figure 3. Screenshot of Discussion Topics

In the implementation phase of this learning process, students from two classes, namely class IIA and class IIB majoring in Informatics Management, were given the task of giving responses on Flip's topic as a part of the first quiz (pre-test). Previously, the

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students had also responded to three other topics related to information technology. The language expressions and grammatical functions related to the topic used in the first quiz were discussed through the Google Classroom platform, including the required grammatical forms used by the students in their responses. In this pretest, students were given the context or situation in which they worked as IT consultants. They had to submit a proposal to upgrade the electronic communication system at a particular company. Students were asked to read company profiles and update requests submitted by various employees from different departments. They were then given a list of the equipment and software currently in use and a description of things that were working well and needed improvement.

After creating a list, the students determined the hardware and software needed to meet all the desired criteria or requirements. Students made recommendations based on the technology discussed in the unit or the content of the teaching materials used. Students were directed to provide recommendations on how to send videos through browsers, Internet safety, and mobile device features. As a guideline in giving responses, students were given several criteria including duration, content, pronunciation, intonation, use of grammar, and vocabulary. Figure 4 shows students' responses in Flip based on the topic given.
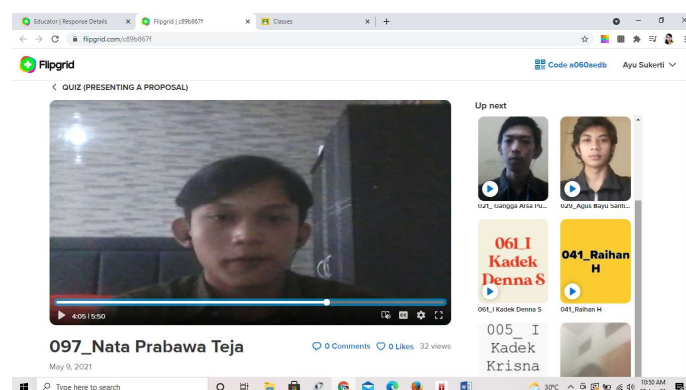
Figure 4. Students' Video Responses

The data obtained from Classes IIA and IIB at this stage were pre-test scores before Flip was implemented with a job sheet based on a task chain and a driving map of outcomes. Post-test results were created after students used Flip with the job sheet. Additionally, the job sheet is provided with an explanation of the grammatical form (linguistic usage) as well as some exercises to deepen students' mastery. Other content included in the job sheet is the details of the exercises that students must master to provide answers that correspond to the unit's topic in Flip and some specific criteria for the required response. At the beginning of the job sheet, there are tips on how to make a good presentation and provide quality answers or comments in Flip.

In the post-test, students were asked to answer the topic covered in the second phase. Discussion of the topic was carried out through discussions in Google Classroom and Google Meet, where students gave a presentation on grammar discussion used in the post-test. In the question and answer session, the presenting group should prepare six questions to ask their peers and present an analysis of the responses to the questions given by their peers. This system is used so that students can improve the quality of their Flip responses in terms of content, elaboration, as well as grammar usage, and vocabulary. This system was also part of the activity described in the job sheet. Figure 5 shows students' responses on Flip for the post-test phase.
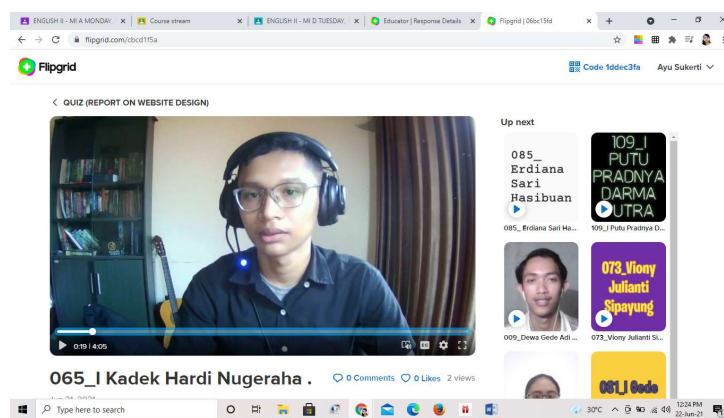
Figure 5. Students' Video Responses

The results of observations on teaching progression and students' responses in Flip, both in the pre-test and post-test phases, indicated that there were differences in the results, as shown in the statistical analysis of SPSS 21. In addition, the post-test results showed a better and more organized description of the content, especially the use of grammatical aspects. The students were also able to delve into the topic raised because they had completed the discussion phase and had done grammar exercises on the topic addressed.

The following table shows the analysis of the pre-test and post-tests results from two classes.

Table 1. Paired Samples Statistics of Class IIA

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	75.18	28	5.157	.975
	Posttest	76.14	28	4.672	.883

The results of data processing with statistics from paired samples show that the average score of the students in the pretest was 75.18, while the average score of the speaking task of the students in the pretest was 76.14. In this case, the value of the standard deviation

in the post-test (4,672) was lower than in the pre-test (5,157), which shows that the post-test data were better than those of the pre-test.

Table 2. Paired Samples Statistics of Class IIB

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	75.30	27	5.743	1.105
	Posttest	77.00	27	5.738	1.104

The average score of 27 students before implementing Flip with the job sheet was 75.30. The average score after the implementation was 77.00. In this case, the value of the standard deviation in the post-test (5,738) was lower than in the pre-test (5,743), which shows that the post-test data were better than in the pre-test. When the standard deviation is small, this indicates the value of the population sample collected or clustered around the mean. Since the value is close to the average, it can be concluded that each member of the sample or population has similarities. Large standard deviations indicate a large difference between members of the population; therefore, a high standard deviation is considered unfavorable.

Table 3. Paired Samples Correlations of Class IIA

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	28	.913	.000

The paired samples correlations analysis was applied to investigate the strength of the connection before and after the Flip and speaking job sheet was implemented in the learning process. According to the analysis, the correlation coefficient (R) of the Class A data was 0.913.

Table 4. Paired Samples Correlations of Class IIB

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	27	.874	.000

Referring to the analysis, the correlation coefficient (R) of data in Class B was 0,874. The result in Class A was strong as indicated in the range of 0.701-0.900, while the range in Class B was between 0,901-1,000 which means the correlation was very strong. The probability value also showed that it was still below 0.05 (Data shows the significant value of the output is 0.00). This means that there was a substantial connection between before and after students were using Flip with the job sheet.

The following table shows the result of paired samples test. This test was used to discover an average difference between two groups of samples that are paired. The hypothesis formulated in this statistical test is H_0 meaning there was no crucial impact

before and after the implementation and H_1, which means there was a crucial impact between before and after Flip with job sheet was implemented.

Table 5. Paired Samples Test of Class IIA

Paired Samples Test

		Paired Differences						
					95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2–tailed)
Pair 1 Pretest – Posttest	−.964	2.099	.397	−1.778	−.150	−2.431	27	.022

According to the comparison of t_{count} and t_{table}, if $t_{count} < t_{table}$ or $-t_{count} > -t_{table}$ then H_0 (there is no positive impact of the dictionary application on students' achievement) is approved, whereas if $t_{count} > t_{table}$ or $-t_{count} < -t_{table}$ then H_0 is declined. The level of significance is concluded using a degree of confidence of 95% or an error rate of 5% ($\alpha = 0.05$). Where the 95% confidence level and sig. (α) = 0.05, then the value of df (degree of freedom) or degree of freedom = (nk) = 28 - 1 = 27 was obtained in class A. With a two-tailed test, each side was of $\alpha / 2 = 0.05 / 2 = 0.025$ to determine the value of t_{table}. The value of t_{table} (0.025.27) is ± 2,05183. Based on the analysis using the SPSS 25 statistics program at a 95% confidence level (a significant level of 0.022 <0.05), then H_0 was declined and H_1 was approved. The result of the data set in class IIA was -2,431<-2,05183.

Table 6. Paired Samples Test of Class IIB

Paired Samples Test

		Paired Differences						
					95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2–tailed)
Pair 1 Pretest – Posttest	−1.704	2.880	.554	−2.843	−.564	−3.074	26	.005

Based on the comparison of t_{count} and t_{table}, if $t_{count} < t_{table}$ or $-t_{count} > -t_{table}$ then H_0 is accepted, whereas if $t_{count} > t_{table}$ or $-t_{count} < -t_{table}$ then H_0 is rejected. Level of Significance was determined using a degree of confidence of 95% or an error rate of 5% ($\alpha = 0.05$). Where the 95% confidence level and sig. (α) = 0.05, then the value of df (degree of freedom) or degree of freedom = (nk) = 27 – 1 = 26 was obtained in class B. With a two-tailed test, each side is of $\alpha / 2 = 0.05 / 2 = 0.025$ to determine the value of t_{table}. The value of t_{table} (0,025,26) was ± 2,05553. Based on the analysis using the SPSS 25 statistics program at a 95% confidence level (a significant level of 0,005 < 0,05), then H_0 is rejected and H_1 is accepted. The data set shows that $-t_{count} < -t_{table}$. The result of the data set was -3,074 < -2,05553.

This comparison means that H_0 was discarded, indicating that there was a fundamental impact between before and after the implementation of Flip with the designed job sheet. Based on the statistical examination, it can be summarized that the

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Flip and job sheet arranged based on the task chain and driving map of outcomes are an effective educational approach to improve the oral skills of students in online learning. Students did better after using Flip with the job sheet. This result is consistent with the finding in the study conducted by Amirulloh et.al (2021). The finding reported that using Flip as a forum to upload videos can improve students' speaking skills in the aspects of fluency, pronunciation, grammar, vocabulary, facial expressions, and gestures. This is in line with Dyer (2015) who found that video recordings engage students in the learning process by allowing them to view their recordings and identify their language levels and areas for improvement. This can help improve skills (Dyer, 2015).

In general, most of the students declared that they appreciated using Flip and found it valuable to participate in asynchronous video-based discussions (Oliver et al., 2017). Other researchers namely Delmas & Moore (2019) and Gurjar (2020) discovered students acknowledged that using Flip improved social presence and enabled students to establish a connection with their classmates. A study by Iona (2017) also highlighted the ease of using Flip. Nur and Jafre (2011) mentioned that the use of video technology in English language lessons improved students' oral presentation skills. Their study also found that the use of video technology maximized the students' speaking skills as they are encouraged to express their opinion.

Analysis of Students' Perspective

This part of the discussion covers students' perspectives on Flip and the job sheet designed based on the task chain and driving map of outcomes. Students' perspective on Flip includes using Flip to practice their speaking competence and things that need to be improved in Flip activities. Referring to the usability of Flip, some students mentioned that Flip helped them to evaluate the result of their video before submitting the final version. Students' perspectives can be seen as follows:

- For me Flip is very helpful for my speaking practice, because besides we can remake the video if an error occurs in video we made, we can also use many of the features provided in Flip.
- In my opinion, by using Flip I can practice my speaking competence better because if I record my video and something is wrong I can repeat it until I get the result I want.
- I find it very helpful to use Flip to practice my speaking competitions. I can look back at my recordings, and if I feel less with the recording, I can repeat the recording. And I don't feel afraid if the signal suddenly disappears in the middle of my explanation.

Students' responses highlight that Flip helped them in evaluating the result of their video before submitting the final result. In this case, Flip serves as the media for students

to check the quality of their performance. The use of the Flip platform will provide the students the ability to have infinite practice with their oral presentation as they can record and view their oral presentation before submitting it and if the students are not satisfied with their performance, they can simply make a new video with just one click. This finding is in accordance with the study conducted by Wilhelm (2014). The study, which focuses on the effective use of multi-faceted video feedback for ESL presentation courses, discovered that creating a video presentation helps students build effective communication skills by allowing them to view and analyze their videos. When students watch their oral presentation video, it stimulates performance recall, which encourages students to reflect on their presentation (Ahmad & Lidadun, 2017). Making a video presentation will encourage students to share their ideas in a non-threatening environment. They will be able to watch videos of their oral presentations and identify their strengths, weaknesses, and areas for improvement in future oral presentations.

Students also mentioned that recording responses in Flip helped them to learn from other students as they can watch their friends' responses. Students' comments can be seen as follows:

- I think using Flip is good, if I feel stuck making videos, I can see a friend's video first for reference
- I am happy to use Flip for practice talking because using Flip I can see and watch my friend's videos so I know my self-profiles ability to help in developing my ability to be better.

The above comments highlight that students got the necessary ideas and references based on the video uploaded by their friends. The other student mentioned that watching other videos helped him/her measure his/her ability and identify the areas that need to be improved. Using Flip has been known as giving a lot of benefits for students in terms of independent learning. The findings are consistent with those of Stoszkowski (2018), Bartlett (2018), and Johnson and Skarpol (2018). (2018). Those studies highlight that learning English speaking with Flip encourages reflective learning, collaborative learning, and independent learning, all of which are beneficial to the students.

One of the students highlighted that using Flip helped to reduce the anxiety as the audience only watched the recorded version not the live presentation via video conference platform.

- I think using Flip is more comfortable than using Google meet sessions, because honestly for me when using Gmeet sessions I feel more nervous than using Flip because Flip is a recording session, not a streaming session, which is the audience is not watching me live when I'm speaking.

According to the preceding statement, Flip also assisted students in practicing speaking competence in a less stressful situation. The findings appeared to be consistent with one of Mango's (2019) and Tan's (2019) studies, in which Flip is regarded as a video discussion interface that allows every student to speak without fear of appearing in front of the class. These findings are consistent with those of McLain (2018), who discovered that 42.9 percent of English language learners in a business writing class increased their confidence by using Flip. Even though the majority of students found Flip activities to be a useful and safe platform for them to explore their speaking competence, one respondent claimed a contrasting standpoint as seen in this statement:

- In my opinion, using Flip makes me feel more challenged to learn English expressions because the results can be watched by friends.

According to Mango (2021), learners perceived Flip as a useful tool for developing their language skills. It provided learners with more autonomy in their learning; they could practice as much as they needed before submitting their posts; they had access to language input via peer and instructor recordings; they were able to listen to their recordings before posting them, and they were free to record whenever, wherever, and whatever they wanted in response to the instructor's posts and guidelines. Additionally, because they were able to have access to listen to and track their posts, learners expressed greater confidence in their learning.

Flip provided students with the opportunity to improve their speaking skills in a risk-free setting environment based on their responses. Students responded positively since they could practice as much as they needed before submitting the final version, retake their recordings until they achieved the desired result, and check other students' recordings as supporting references. Even though the majority of students recognized the learning autonomy provided by Flip integration, including a 'non-threatening' media for language practice, introspection, and self-evaluation, some participants noted the need for reviews or replies from the lecturer or other classmates, as indicated in the following statements:

- What needs to be improved is the response from each user, increasing the interaction and discussion of each uploaded video
- It might be interesting if we could provide a voice-recorded commentary for a more expressive response.

The preceding statements underline that students continued to depend largely on the lecturer's reviews and suggestions from their peers to assess their development. This finding is in line with the result found in Mango (2021). According to the study, the pressure between autonomous learning and dependence on the instructor indicates that the two must be aligned in the language class environment. This alignment would help

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students in gaining enough self-confidence to assess their learning progress without the need for perpetual and prompt reviews on every assignment. Aside from that, the students identified some drawbacks in terms of technical aspects:

- Everything is already good, we don't have to record the video in another application and upload it again, with Flip it's all in one. But one thing that is a little bit annoying is when using the Flip smartphone app, there is a lot of bug in it, so it's better to open it from the browser.
- In my opinion, what needs to be improved in Flip is that the video resolution should be increased, so that the video is clearer and not blurry.

The technical aspects pointed out by the students include the user experience in accessing the mobile version of Flip compared to the website version and the need to improve video resolution. In addition, students also gave responses on the job sheet arranged in this study aimed to students understand the topic discussed and most importantly the language expression used to give responses.

- I think the job sheet already is good and helps in understanding the material, but sometimes there is a language expression that is difficult to understand so it needs to be improved
- I don't think it needs to be fixed, but it's better to add some translations from English to Indonesian in the sample questions to make it easier to understand
- I think it's good enough. But, will be better if the important things, like the structure have color and bigger bold font

Referring to the above statements, students noted some areas that need to be improved including the language used in explaining the content and the mechanics such as the font format and color. Most of the students acknowledged that the contents are already good, but the language expressions need to be made simpler with translation into the student's native language.

4. CONCLUSION

The findings in this study show that Flip is an effective digital platform to be implemented in language teaching especially in teaching speaking competence. Participants in this study gained improvement in their speaking tests based on the results of statistical analysis on their pre-test and post-tests. and gave positive perspectives on the aspect of using Flip and the job sheet arranged based on the task chain and driving map of outcomes. The implementation of Flip helped students to find references from other students' videos and retake videos to meet the desired results. In other words, Flip assisted students to practice their speaking competence independently and measure their progress according to the hierarchy of task difficulty. Students also could rely on the job sheet to enhance their quality of responses in terms of grammatical structure and vocabulary. In addition, the job sheet also gave students a better understanding of the target and

requirements for each task they need to complete. Thus, they could prepare for the next level by reflecting on their progress.

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