

CHAPTER IV

RESULTS AND DISCUSSION

4.1. Quantitative Results

The purpose of this quantitative data was to know the effectiveness of ChatGPT feedback on students' argumentative writing achievement. To give an explanation, students' scores after receiving ChatGPT feedback were compared with their scores after receiving lecturer's feedback.

The quantitative data were taken from students' task 1 and task 2 scores. Task 1 is the students' task after receiving ChatGPT's feedback, while Task 2 is the students' task after receiving the lecturer's feedback. The results of students' task 1 and task 2 writing scores are shown in Table 4.1 below:

Table 2.Result of students' task 1 and task 2

Participant (P)	ChatGPT Feedback	Lecturer's Feedback
P1	70	78
P2	67	82
P3	85	84
P4	83	72
P5	75	84
P6	80	83
P7	75	84
P8	70	80
P9	70	72

P10	65	83
P11	70	84
P12	75	84

The results indicate that students' scores vary. "P" in column 1 means Participant. The researcher changed it to ensure the confidentiality of the students' data. Most students got higher scores after receiving lecturer's feedback compared with receiving ChatGPT feedback. Then, these scores were analyzed using descriptive and inferential statistics to determine whether there was a significant difference between the two types of feedback.

Table 3. The descriptive statistics results

	ChatGPT Feedback	Lecture Feedback
N	12	12
Missing	0	0
Mean	73.8	80.8
Standard deviation	6.28	4.53
Minimum	65.0	72.0
Maximum	85.0	84.0
Shapiro-Wilk W	0.923	0.725
Shapiro-Wilk p	.314	.001

The quantitative data showed that there was a significant difference in the students' scores after receiving ChatGPT feedback and lecture feedback. Based on

the mean score, students get a higher score with the lecturer's feedback (80.8) than with ChatGPT feedback (73.8). This shows that students get a good score when revising their essay based on the lecturer's feedback.

Table 4. The inferential statistics results

Paired Samples T-Test

			Statistic	df	p
ChatGPT Feedback	Lecturer's Feedback	Student's t	-	11.0	.010
			3.11		
		Wilcoxon W	10.0		.025

Note. $H_a \mu_{\text{Measure 1}} - \mu_{\text{Measure 2}} \neq 0$

Also, the results of the Wilcoxon Signed-Rank Test revealed a significant difference between the two sets of scores ($p = .025$). Since the p-value was lower than .05, the null hypothesis was rejected. According to Creswell (2014), a p-value lower than .05 means that the difference between the scores is significant and is unlikely to occur by chance.

Therefore, it can be concluded that students got higher score after getting lecture feedback than after getting ChatGPT feedback. It is showing that lecturer's feedback gives much help to students in revising their argumentative writing. However, this research did not include a control group or writing scores before the feedback was given, so it can not be concluded that ChatGPT feedback improved students' writing alone.

4.2. Qualitative Results

The qualitative data were taken from 2 sources, which is open ended questionnaire and an interview. These 2 qualitative datasets were analyzed using thematic analysis by Braun and Clarke (2006).

4.2.1 Questionnaire

The first set of qualitative data is from an open-ended questionnaire. The total number of students who filled out the questionnaire was 9 out of 12 students. Three students did not fill out the questionnaire due to their lack of availability. Therefore, it is still 75% of the participants who filled out the questionnaire. In the questionnaire itself, there was an informed consent to acknowledge that the students, as the participants, agreed to be the participants in this research. The information given by them will be kept private.

The analysis began with familiarizing the data by reading all questionnaire responses again and again. Next, the researcher found the initial code, as Braun and Clarke (2006) mentioned, from students' responses about their experience using ChatGPT and the lecturer's feedback. Then, the same or similar codes were grouped into a category. After that, the researcher gave the final theme based on the students' responses to explain how students think about ChatGPT feedback compared with the lecturer's feedback.

Table 5.Code and Theme Development

Students' Response	Initial Code	Category	Theme
ChatGPT gives me instant feedback at any time, so I can revise my work immediately without waiting	Instant feedback	Accesibility	Advantages Of ChatGPT
ChatGPT gives feedback quickly and can be used anytime	Quick feedback	Accesibility	
ChatGPT feedback was helpful and efficient. It helped me identify grammar mistakes	Grammar	Grammar improvement	
In my opinion, lecturer's	Easy to	lack of	Advantages of

feedback was much easier to understand, clear, and straightforward to apply to my revision	understand and clear, straightforward	availability	Lecture's Feedback
It helped me improve my essay by making my arguments clearer and correcting some mistakes	Clear arguments, correcting mistakes	Helpful for improvement	
ChatGPT feedback may not fully understand the assignment context	Lack of contextual understanding	Understanding	Disadvantages of ChatGPT
The language used by ChatGPT felt too rigid, stiff, and robotic	Rigid language	Language error	
I would recommend the use of ChatGPT, but only as a complementary tool.	Recommend ChatGPT	Complementary tool	Complementary
However, it should be used together with lecturer's feedback to ensure the content and arguments	ChatGPT and lecturer's feedback	Complementary tool	Complementary

Based on the thematic analysis, several themes were identified from the students' responses in the questionnaire. Similar responses were grouped into the same theme based on the meaning. Table 4.5 shows the themes, descriptions and examples of students' responses. There are 4 themes identified, which are advantages, disadvantages of ChatGPT, advantages of lecturer's feedback, and ChatGPT as a complementary tool.

Table 6. Themes identified from students' responses

Theme	Description	Example from Students' Responses
Advantages of ChatGPT	Students said that ChatGPT is fast, very accessible, and helpful for grammar and vocabulary improvement	ChatGPT gives me instant feedback at any time, so I can revise my work immediately
Advantages of Lecturer's feedback	Students said that lecturer's feedback is more clear, and easier to understand	lecturer's feedback was much easier to understand, clear, and straightforward
Disadvantages of ChatGPT	Students said that ChatGPT lacks of understanding, and using rigid language	ChatGPT feedback may not fully understand the assignment context The language used by ChatGPT felt too rigid, stiff, and robotic
Complementary tool	Students said that ChatGPT should be used together with lecturer's feedback, rather than replacing either ChatGPT or lecture's feedback	it should be used together with lecturer's feedback

Table 4.5 shows the themes found from the questionnaire. There are 4 themes that the researcher found from the analysis, which is: advantages of ChatGPT, Advantages of lecturer's feedback, disadvantages of ChatGPT, and a complementary tool. The results show that students like to use ChatGPT feedback because ChatGPT is very accessible, they can ask ChatGPT immediately, it can be

used any time, gives them a fast response, no need to wait for a long time, and very helpful for improving grammar and vocabulary. While lecturer's feedback is more clear, more detailed, and easier to understand. Some of them also mentioned that ChatGPT uses rigid language and sometimes does not fully understand the context. Therefore, the students suggest using both feedback together to improve the argumentative essay, rather than replacing lecturer's feedback.

Advantages of ChatGPT feedback

The first theme found from the data was the advantages of ChatGPT feedback. Many students said that ChatGPT is very useful because it gives them a fast response, can be accessed anytime, anywhere. And also, students said that ChatGPT helped them to identify grammar errors and improve their grammar. For example, one student said that "ChatGPT gives me instant feedback at any time, so I can revise my work immediately". This shows that students like that ChatGPT is very accessible and fast response.

Advantages of lecture feedback

The second theme found from the data was the advantages of the lecturer's feedback. Students said that the lecturer's feedback is more clear, with a more detailed explanation, and it is very easy to understand. In addition, students said that the lecturer's feedback is very helpful to make their arguments clearer. For example, one student said that "In my opinion, the lecturer's feedback was much easier to understand, clear, and straightforward to apply to my revision". And another student said that "It helped me improve my essay by making my arguments clearer and correcting some mistakes". Therefore, the students said that the lecturer's feedback can help them know what to improve easily, with clear and detailed explanations, and make their arguments clearer.

Disadvantages of ChatGPT feedback

The third theme that the researcher found from the questionnaire was the disadvantages of ChatGPT feedback. Even though students said that ChatGPT is very helpful, they also said that ChatGPT has disadvantages. They said that ChatGPT used rigid and robotic language, which make them difficult to understand

the feedback. Also, ChatGPT provides general suggestions and does not always fully understand the context. For example, a student said that “ChatGPT feedback may not fully understand the assignment context”, “The language used by ChatGPT felt too rigid, stiff, and robotic.” Therefore, this shows that even though ChatGPT is helpful, it still has disadvantages, which make the students difficult to understand the feedback, and it provides general suggestions

Complementary tool

The fourth theme found from the questionnaire was that ChatGPT can be used as a complementary tool. Rather than ChatGPT or a lecturer’s feedback, it is good to use them together. ChatGPT provides quick and accessible feedback, while the lecturer’s feedback is more clear, more detailed, specific, and easier to understand. So, students said that ChatGPT can be used along with lecturer’s feedback in revising an argumentative essay, rather than replacing it.

4.2.2 Semi-structured interview

To know how students think about ChatGPT’s feedback compared with lecturer’s feedback, a semi-structured interview was conducted with selected participants. According to Sugiyono (2022), it is good to use semi structure interview, so that we can know more deeply how students’ perception about the use of ChatGPT feedback compared with the lecturer’s feedback in revising an argumentative essay. There were four students interviewed. The chosen interview participants are students who likes ChatGPT feedback, lecturer’s feedback, doesn’t like lecturer’s feedback and like both types of feedback. This is conducted so that the researcher can get different perceptions about the use of ChatGPT feedback compared with the lecturer’s feedback in revising an argumentative essay. Table 4.6 summarize the participants’ interview answers:

Table 7. Quotes from the participants, the coding, and the theme

What students said	Initial Code	Theme
Chat GPT is easier, like fast response (P1)	Instant feedback	Advantages of ChatGPT feedback
ChatGPT is available	Easy to access	

anytime, anywhere (P3)		
My lecturer focus on structure (P1)	Focus on structure	Advantages of lecturer's feedback
Sometimes ChatGPT got me wrong (P4)	ChatGPT misunderstood	Disadvantages of ChatGPT feedback
The lecturer knows our writing style	Personalized feedback	Advantages of lecturer's feedback
I prefer both	Combine feedback	ChatGPT as a complementary tool

The interview data were analyzed using Braun and Clarke (2006) thematic analysis. After coding the interview transcript, four themes were found. These show students perceptions of ChatGPT and lecturer's feedback in revising argumentative essay.

Advantages of ChatGPT feedback

The first theme found from the data was the advantages of ChatGPT feedback. 3 of 4 participants said that ChatGPT is very helpful to let them know what are the grammar errors, gives feedback directly, no need to wait for a long time, without waiting for the lecturer.

Participant 1 said that ChatGPT gives very fast response, but sometimes the language is rigid and confusing. Participant 2 said that ChatGPT helped to grammar errors, improved quality of the argument, and it was very easy to ask. Participant 4 said that ChatGPT feedback is very excellent that it gave clear suggestions for improvement, especially in grammar, because participant 4 said that sometimes she/he is confused about tenses.

This shows that students like ChatGPT feedback because its instant feedback, improving grammar error.

Advantages of lecture feedback

The second theme found from the data was the advantages of lecturer's feedback. Three of four participants said that lecturer's feedback is very useful that it was more personalized compared with the ChatGPT feedback. Lecturer's

feedback can give students feedback based on the students' writing style because the lecturer knows the students very well.

Participant 1 said that lecturer's feedback helped to improve the structure of the essay. Sometimes he/she is confused on how to organize the introduction and body paragraph. Participant 3 said that lecturer's feedback was more personalized because the lecturer know students writing styles and helped to improve the vocabulary. Participant 4 said that lecturer's feedback was more comprehensive and contextualized.

This shows that students like the lecturer's feedback because it helped them to improve argument, structure of the essay, and more personalized

Disadvantages of ChatGPT feedback

The third theme found from the data was the disadvantages of ChatGPT feedback. All the participants said that ChatGPT feedback had its own weaknesses. One of them was because ChatGPT sometimes misunderstood their prompt and gave a general response.

Participant 1 said that ChatGPT's feedback language was too rigid, robotic, and make him/her confused. Participant 2 and 4 said that ChatGPT misunderstood their instruction or prompts, they needed to give the instructions or the prompts more clearly and a more detailed prompt. Participant 3 said that ChatGPT feedback depended on the prompt given by them, so it is very important for them to give a clear and detailed prompt to get accurate feedback.

Complementary tool

The last theme found from the data was ChatGPT as a complementary tool. All participants said that ChatGPT should be used along with lecturer's feedback because it works best when these 2 types of feedback are combined.

Participant 1 said that both ChatGPT and lecture's feedback should be used together because these 2 feedbacks helped him/her in different aspects. Participant 3 also said that ChatGPT cannot replace lecture's feedback, so it should be used together with lecture's feedback because lecturers have more experience and can

give personalized guidance. Participant 4 said that they still need guidance from the lecturer because sometimes ChatGPT provides incorrect feedback.

This shows that students like to use ChatGPT as a complementary tool, not a replacement for lecture's feedback. If these two types of feedback are combined, it will give better support in revising their argumentative essay, because each type of feedback has different strengths and weaknesses. ChatGPT can give instant feedback and help to improve grammar, while lecture's feedback can give personalized feedback and improve argument and essay structure.

4.3. Discussion

4.3.1 To what extent does ChatGPT's feedback improve students' writing skills in an argumentative writing course?

The results of the research showed that ChatGPT feedback helped students to improve their argumentative essays, especially in improving their grammar. But the quantitative results, which were taken from 2 scores, ChatGPT feedback and lecturer's feedback, showed that the lecturer's feedback helped students to get a higher writing score compared with the ChatGPT feedback. The mean score after students received the lecturer's feedback is 80,8, and the mean score after receiving ChatGPT feedback is 73.8. This shows that these types of feedback can help students to improve their essays, but the lecturer's feedback helped them to get a better writing score compared with the ChatGPT feedback.

One possible reason is that ChatGPT helped them to improve on grammar and vocabulary, and it gave them very instant feedback that students do not have to wait for a long time to get the feedback, while lecture feedback helped them on essay structure, argument development, and the overall essay. This finding is related to Crowhurst's (1990) study. It said that an argumentative essay should have a clear structure, which includes an introduction, body paragraphs, supporting arguments, and a conclusion. It also supports Bailey (2018), who said that an essay consists of an introduction, body paragraphs that develop and support the argument, and followed by a conclusion. Since ChatGPT and lecture feedback helped them to improve in different aspects, students can easily improve their essays.

This finding also supports Xiao and Zhi (2023), who found that ChatGPT can help students in improving their argumentative essays. The students liked ChatGPT because it was easy to use and how quickly it could respond to their questions. One of the biggest strengths that the students said was the instant feedback that ChatGPT could give. This finding is also supported by Alsofyani and Barzanji (2025), who found that students have a positive perception about ChatGPT feedback because it gives instant and individualized support during writing. Also, Kalla and Kuraku (2023) found that ChatGPT can give students feedback anytime and anywhere.

This finding shows that ChatGPT can be a useful tool for students to improve their argumentative writing, especially in grammar and language errors, while lecturer's feedback helped them in essay structure and argument development. Therefore, ChatGPT may be useful as a complementary tool, although it cannot replace lecture's feedback.

4.3.2 What are students' perceptions of ChatGPT's feedback in their argumentative writing process?

From the questionnaire and interview, it is shown that students like ChatGPT because it gives them instant feedback, helps them in grammar, and they can ask more if they are still confused about the feedback. This finding supports Xiao and Zhi (2023), who found that students like to use ChatGPT because it provides instant feedback, and students can ask for a followup questions directly. Similar to their study, the students in this research liked ChatGPT because it helped them to revise their writing and get instant feedback. This also supports the Sociocultural theory of Vygotsky (1978), which states that learners can improve their skills with the help or guidance from the knowledgeable others. In this research, ChatGPT acted as the knowledgeable one that helped students to revise their argumentative writing

However, students also said that the language used by ChatGPT was too rigid, robotic, confusing, and it gave too general responses. Some students also said that sometimes, ChatGPT misunderstood their prompts, and their answer was not related to the students because they did not give a detailed and comprehensive prompt. These findings support Kalla and Kuraku (2023), who said that ChatGPT's may misunderstand and provide inaccurate responses. This finding is also supported by

Yoon et al. (2023), who found that ChatGPT feedback sometimes gave a general response.

On the other hand, the lecturer's feedback was more personalized and focused on structure and argument development. This finding supported by Hyland and Hyland (2006) who said that teacher feedback often considered more reliable and trustable by students because it is from someone with higher knowledge, experience and understand students' needs. This result also suits with the Feedback Intervention Theory by Kluger & Denisi (1996) that said that effective feedback should help students to understand which part of their essay that needs improvement. In this research, ChatGPT and lecture feedback helped students to improve different aspects of writing. ChatGPT helped students to improve their grammar, especially in tenses, because students are usually confused in grammar, while the lecturer's feedback helped them to improve their essay structure and arguments. Therefore, these types of feedback helped students to understand which part of their essay needs improvement, which suits the Feedback Intervention Theory (FIT) by Kluger & Denisi, 1996.

Another important finding in this research was that most of the students suggested to use ChatGPT feedback with lecture feedback as a complementary tool or an additional tool along with lecture feedback. Students said that each type of feedback has its strengths and weaknesses. ChatGPT can help them to improve grammar or the other language errors, while lecture feedback can help them to improve the essay's structure and argument development. Additionally, the lecturer's feedback is more personalized. Therefore, students like to use ChatGPT as a complementary tool rather than a replacement for lecturers' feedback. They like to combine ChatGPT feedback and the lecturer's feedback to improve their essays. This finding supports Liang (2026), who found that students like to use ChatGPT feedback and teacher feedback in L2 writing. Liang suggested that ChatGPT feedback can be effectively used with teacher feedback to improve students' writing.

This finding also supports Vygotsky (1978), who said that guidance or feedback from the knowledgeable others is very important in learning. Even though ChatGPT can provide helpful feedback on grammar and the other language errors,

students appreciated the lecturer's feedback because the lecturer can provide more personalized feedback that ChatGPT cannot.

Overall, the findings suggest that ChatGPT should be used with lecturer's feedback as a complementary tool rather than replacing lecturer's feedback. By combining these two types of feedback, it can provide more comprehensive feedback in improving both aspects, language and essay structure, in improving argumentative writing.