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THE RELATIONSHIP AMONG LANGUAGE MINDSET, CORRECTIVE FEEDBACK PREFERENCES, AND FOLLOW-UP STRATEGIES OF STUDENTS IN WRITING SCIENTIFIC TEXTS

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Abstract

Student learning success is primarily determined by their skills in writing scientific texts as their final assignment. However, students experience problems when preparing research proposals. The obstacles experienced were triggered by students' views that scientific writing is challenging and students' lack of understanding of input from lecturers. So, this research has four objectives, namely describing (a) language mindset, (b) corrective feedback preferences, (c) students' follow-up strategies in writing scientific texts, and (c) the correlation of the three. This research employed a mixed method. The research subjects were Indonesian Language Education students at the University of Muhammadiyah Malang. Data was collected using questionnaires and in-depth interviews. The results show that the highest average language mindset is a growth language mindset (4.573). As many as 95.3% of students had an average questionnaire of 3.5-5.00, so most students had a growth language mindset tendency. The dominant corrective feedback that students prefer is an explicit correction (4,895). The average of the follow-up strategy is 4.30, demonstrating that students try to receive corrective feedback on their written scientific texts from lecturers. Based on the correlation results, there is a significant relationship between language mindset and corrective feedback preference (0.529); there is a relationship between language mindset and follow-up strategy-based corrective feedback (0.297); but there is no significant relationship between corrective feedback preference and follow-up strategy based corrective feedback (0.160). The conclusion is that scientific text writing guidance activities need to encourage an increase in students' growth language mindset, corrective feedback preferences, and follow-up strategies in writing scientific text.

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INTRODUCTION

Academic writing dominates academic life worldwide (Hyland, 2016), from school to college (Prihatini et al., 2022). This phenomenon is due to writing being a complex process. Writing requires cognitive processes during planning, organising, and revising (Cheung et al., 2021). In addition, students require proficiency in grammar, a deep understanding of concepts, the capacity to organise ideas effectively, and sufficient literacy skills. The intricacy of the writing process leads to challenges students encounter, including limited vocabulary, inadequate grammar, deficient spelling, student preparedness, and insufficient literacy resources (Moses & Mohamad, 2019). Hence, it is essential to undertake a systematic approach to enhance writing abilities, even when improving grammar skills (Wyse & Torgerson, 2017). Therefore, language learners require long-term commitment and persistence to succeed (Duckworth et al., 2007).

At the university, students must have skills in writing scientific texts because it influences student learning success. The skill of writing scientific texts in the form of a final assignment (thesis) determines a student's graduation. Scientific writing skills are also a means of establishing language competencies and special conventions in various fields of science at the university (Pineteh, 2013). So, students can rationally explore specific topics from writing activities (Hyland, 2016) within the framework of academic discourse (Kiriakos & Tienari, 2018).

However, writing scientific texts is still the biggest challenge for students. Previous research suggests that academic writing requires much effort (Kiriakos & Tienari, 2018). Writing is the most difficult of the four language skills because it requires complex competencies (Muñoz, 2010). Writing also involves other language skills to support optimal writing performance (Prihatini et al., 2023). Difficulties in writing result in students' writing still having many shortcomings (Hyland, 2016). However, deficiencies in writing are often not realised by the writers, so improving and perfecting the writing becomes difficult for the writers themselves (Bem, 2021).

Based on initial observations and interviews with students in the research course in Indonesian Language Education at the Universitas Muhammadiyah Malang, students experienced difficulties in writing scientific texts, especially research proposals, due to internal and external factors. Internal factors are caused by students' mindset toward writing scientific texts, which are considered complicated and complex. Apart from that, students also do not understand the feedback given by lecturers. They must produce a complete research proposal ready to be registered for the research proposal seminar. Thus, the preparation of the proposal greatly influences the completion of the final assignment.

If they try, students will achieve the desired learning outcomes to overcome this problem (Bai & Wang, 2023). Some students believe their language skills can be improved if they work hard with the right strategies. However, some students think language skills cannot be improved (Lou & Noels, 2017). In general, students are very susceptible to the belief that they are not talented in mastering language skills, so their language skills are believed to be unable to develop. This thinking can undermine their learning efforts, especially when faced with cognitive challenges (Ryan & Mercer, 2012).

On the other hand, students of Indonesian Language Education at the Universitas Muhammadiyah Malang felt that the corrections from their lecturers were challenging to understand, thus interfering with their writing fluency. As previous research states, corrective feedback contains error correction (Zhao, 2015) from self-taught, teachers, and other learners (Vaghei et al., 2020, 2021) by providing input, suggestions, and criticism of the products or processes produced by students. Therefore, students must be able to manage their skills independently and effectively (Bai & Wang, 2023) through the corrective feedback it receives. Students need to follow up on the feedback from their lecturers so they can revise the research proposal. Students can employ a follow-up strategy by actively listening to corrective feedback and engaging in a consultation session with their lecturers. After consultation, corrective feedback is used to continue and correct text (Saito, 1994). Previous studies found that Iranian students perceive lecturers as the sole reliable authority for information sources and error correction. They exhibit a strong aversion to self-directed learning methods, as they are accustomed to receiving explanations from teachers in school and at the tertiary level (Mahvelati, 2021).

This phenomenon can be studied from a psycholinguistic perspective. The study focuses on language mindset and corrective feedback preferences in second-language writing. Moreover, these two topics have received much attention from researchers.

The use of a growth mindset is increasingly popular in education, but there is still debate about how well it plays a role in learning (Burnette et al., 2022; Savvides & Bond,

2021). In this regard, the research trend is towards the language mindset framework, which provides a new perspective for analysing the emotional factors of second language writers (Yao et al., 2021). Previous studies have found a positive contribution of a growth mindset to goal orientation and response to failure (Lou & Noels, 2016a, 2017), writing competence (Lee et al., 2023), motivation to write (Waller & Papi, 2017), grammar learning strategies and gender roles (Zarrinabadi et al., 2021), *self-regulated writing strategies* (Xu & Wang, 2022), academic achievement goals (Papi et al., 2019), self-efficacy and task values (Bai et al., 2021), as well as self-efficacy and intrinsic value (Bai & Wang, 2023).

Meanwhile, Sheen (2010, 2011) and Lee (2013) stated that corrective feedback has attracted more attention from researchers in the last two decades (Zhao, 2015). Despite this, relatively little research has investigated how corrective feedback, individual differences, attention, and motivation interact in the second language learning process (Zhao, 2015). Therefore, research must address whether corrective feedback effectively contributes to students writing and revising writing (Ferris, 2010). Previous research has proven the role of corrective feedback preferences with motivation (Papi et al., 2019; Zhao, 2015) and writing skills (Fatima Zohra & Hamitouche, 2022; Ferris, 2010; Saito, 1994).

However, previous research investigates the relationship between language mindset and corrective feedback in students learning to write in English as a foreign language (Vaghei et al., 2020, 2021; Yao et al., 2021; Yao & Zhu, 2022) and Spanish as a foreign language (Papi et al., 2021). No research still focuses on learners of Indonesian as a second language. Previous research also does not explain what type of text is meant. Language mindset is related to language skills more specifically (Khajavy et al., 2022). Different text types can trigger different writing processes, thoughts, and feedback needs. Moreover, scientific texts contain complex activities essential to language learning success in higher education.

Based on this background, the novelty of the current study is as follows. First, research conducted in Indonesia still has not received much attention from researchers about language mindset, corrective feedback preferences, and follow-up strategies in writing scientific texts. Second, this research focuses on the relationship among language mindset, corrective feedback preferences, and follow-up strategies in writing scientific texts. Third, this research subject is taking a targeted Research course to complete a research proposal at the end of the semester through a consultation session with lecturers.

Therefore, this research aims to fill the research gap based on four research objectives, namely (a) how do the language mindset of students in writing scientific texts?, (b) How do the corrective feedback preferences of students in writing scientific texts?, (c) how do students' follow-up strategies in writing scientific texts?, and (d) how do the relationship among language mindset, corrective feedback preferences, and follow-up strategies in writing scientific texts?. This research will show students' language mindset, corrective feedback preferences, and follow-up strategies in their research proposal writing. This research may also assist students in determining their language mindset and corrective feedback preferences to improve their scientific text-writing skills. Teachers can also use the study results to give corrective feedback on research proposals written by students based on the student's way of thinking about language and how they like to be corrected.

RESEARCH METHOD

Research Design

This research uses mixed methods because it is an integrative strategy that integrates quantitative and qualitative methodologies within a single study to offer a more comprehensive and holistic understanding of an issue and to ensure the integration of the information provided (Almeida, 2018; Anguera et al., 2018). This research employs quantitative and qualitative techniques to describe students' language mindset with their

preferences for corrective feedback and follow-up strategies in writing scientific texts. The three variables are explained based on simple descriptive statistical measurements to describe the condition of students in all three. In addition, the three variables were also measured for correlation to see the relationship among them.

Sample

The sample of this research was 43 Indonesian Language Education students at the University of Muhammadiyah Malang. The sample is selected based on several criteria, namely (a) taking Research courses, (b) actively participating in Research courses, (c) conducting intensive consultation activities with lecturers, and (d) already having a research title that has been consulted and approved by lecturers. The demographic information of the sample is (a) females and males, (b) Age range 20-22 years, (c) language as a first or second language, and (d) research topics include linguistics, literature, and Indonesian learning.

Instruments

The first research objective data was collected using a language mindset questionnaire adapted from Lou & Noels (2017) and Papi et al. (2019). The second and third research objective data was collected using a corrective feedback preference questionnaire adapted from Saito (1994) and Zhao (2015). The questionnaire consists of 30 statement items with a Likert scale 5, i.e. 1=strongly disagree, 2=disagree, 3=hesitate, 4=agree, and 5=strongly agree. The questionnaire is presented through Google Forms during the Research course towards the end of the semester, assuming students have gained enough experience in writing and consulting activities with lecturers. Students determine the scale with the questionnaire according to their conditions while writing scientific texts. To avoid bias in this study, the lecturer of the Research course said that filling out the questionnaire did not include an assessment but a reflection on learning. Thus, questionnaire scores can objectively describe the condition of students' language mindset, corrective feedback preference, and follow-up strategies. The questionnaire grid is presented as follows.

Table 1
Questionnaire Grid

Dimensions	Subdimensional	Code	Indicator	Item Number
Language mindset	Growth Language Mindset	GLM	Learners' confidence in the flexibility of language learning abilities	1, 9, 17
	Fixed Language Mindset	FLM	Learner confidence in the stability of language learning abilities	2, 10, 18
	Second language aptitude beliefs	L2AB	beliefs about whether the ability to learn a second language can be improved through effort or not	8, 11, 19, 24
Corrective Feedback Preference	Explicit correction + metalinguistic information	ECMI	Learners' preferences for their L2 errors corrected explicitly and provided metalinguistic information explaining why they were wrong	7, 27
	Prompt with a metalinguistic clue	PMC	Learner preferences for receiving information metalinguistics about their L2 errors to encourage them to self-correct	13, 29
	Absence of CF	ACF	Learner's reluctance to accept corrective feedback	4, 30
	Type of Feedback	T.F	Types of corrective feedback	3, 5, 14, 15, 21, 22, 25, 28
Follow-up Strategy		FSCF	Follow-up strategies on corrective feedback	6, 12, 16,

Dimensions	Subdimensional	Code	Indicator	Item Number
Based on Corrective Feedback			provided by lecturers	20, 23, 26

The validity of the questionnaires was measured via SPSS with the following results.

Table 2
Instrument Validity

Variables	N	Measured r	Table r	Validity
Language Mindset	43	0,885		Valid
Corrective Feedback Preference	43	0,727		Valid
Follow-up Strategy based Corrective Feedback	43	0,737		Valid

Table 2 shows that the instrument used is valid. These results were obtained through the Pearson Product Moment correlation test by measuring the relationship between questionnaire results of language mindset, corrective feedback preference, and follow-up strategies in writing scientific text to the total questionnaire score. In addition, the reliability test showed a result of 0.810, so the questionnaire was classified as reliable. So, the questionnaire can be used to collect research data.

Data were also collected using in-depth interviews in the form of descriptive questions. The interview obtains detailed information regarding language mindset and corrective feedback preferences students use in writing scientific texts. Interview questions adapted from Saito (1994) and Zhao (2015) included some questions about (a) how lecturers deliver corrective feedback, (b) responses to students' feelings and actions after receiving corrective feedback, (c) the type and impact of corrective feedback desired by students, (d) the contribution of corrective feedback to students' active participation in lectures, and (e) students' impressions of the lecturer's awareness of corrective feedback preferences given.

Data Analysis

SPSS was used to analyse the questionnaire as the quantitative data. The first, second, and third research objectives were analysed using descriptive statistics on questionnaire results to obtain results, such as mean. The average value of the language mindset questionnaire, corrective feedback preferences, and follow-up strategies in writing the scientific text were interpreted as high (3.5-5.0), moderate (2.5-3.4), or low (1.0-2.4).

We measured the normality test before analysing the correlation to describe the fourth research objective.

Table 3
Normality Test Results

Variables	Shapiro-Wilk		
	Statistics	df	Sig.
Language Mindset	,971	43	,330
Corrective Feedback Preference	,947	43	,047
Follow-up Strategy based Corrective Feedback	,905	43	,002

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 3 shows the Shapiro-Wilk normality test findings since the sample size is less than 100. The normality test shows that language mindset (p=0.330) and corrective feedback preference (p=0.047) are normally distributed since p > 0.05. However, the follow-up strategies based on corrective feedback preference (p=0.002) are not normally distributed (p <0.05).

For the fourth research objective, SPSS was used to measure the correlation among language mindset, corrective feedback preferences, and follow-up strategies when producing scientific texts based on lecturers' feedback. Pearson Product Moment correlation is used for measuring the relationship between normally distributed data. Kendall's tau-b correlation is used for measuring the relationship between non-normal data. Korelasi tersebut digunakan untuk menentukan

The hypotheses in this research are explained as follows: (a) hypothesis of the relationship between language mindset and corrective feedback preference, (b) hypothesis of the relationship between language mindset and follow-up strategy, and (c) hypothesis of the relationship between corrective feedback preference and follow-up strategy in writing scientific text. Each hypothesis consists of (a) Ho, which indicates no relationship between the two variables in question, and (b) Ha, which means there is a significant relationship between these variables. The correlation test results will determine whether Ho and Ha are accepted or rejected.

Furthermore, the quantitative data analysis results were confirmed or explored by utilising the results of in-depth interviews. The in-depth interview results can contribute more to understanding the research problems (Creswell, 2015). Therefore, in-depth interviews provided comprehensive information about students' language mindset, corrective feedback preferences, and follow-up strategies for writing scientific texts.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

Language Mindset of Students in Writing Scientific Texts

The language mindset of students in writing scientific texts is shown in the following results.

Table 4
Results of the Language Mindset Questionnaire

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
Language Mindset	43	2,700	5,000	4,006	,481	,232	-.249	,361	,527	,709
Growth Language Mindset	43	3,333	5,000	4,573	,456	,208	-.928	,361	,147	,709
Second Language Aptitude Beliefs	43	2.25	5,000	4,098	,597	,358	-.538	,361	,807	,709
Fixed Language Mindset	43	2,000	5,000	3,317	,755	,571	,112	,361	-.351	,709
Valid N (listwise)	43									

Table 4 reveals the highest average is growth language mindset (4.573). The average fixed-language mindset is moderate (3.317). These results show that the growth language mindset is most common among students who write scientific works. A high-growth language mindset gives students confidence in their language learning flexibility. Thus, students believe scientific writing skills evolve. The second language aptitude belief is likewise high (4.098). The result shows that students can enhance their scientific writing skills with practice and effort. These findings follow the results of an in-depth interview with one of the students.

"I am still learning to write scientific texts, especially research proposals. There are many things I don't understand. Finding theories is still difficult; the method must also be clear. There are difficulties, but that doesn't mean you can't do it, right? At first, it is not easy, but it will feel easier after a while. The key is, yes, we must be confident in our abilities. Apart from that, the lecture process in this Research course helped me write my research proposal. Writing a research proposal tends to be easier for me to complete, but conveying it orally is really hard for me. I'm confused about explaining it."

The interview result indicates that students struggle with scientific writing, especially research proposals. Exploring theories and establishing methods are complicated. Despite these challenges, the student was confident in finishing the study proposal. The belief that writing skills can be improved reveals a growth language attitude.

However, interview results were also found to represent a fixed language mindset.

"In my opinion, making a research proposal is difficult, yes. I'm confused about what I should research. Fortunately, the lecturer was guided by the topic selection. However, looking for theories and developing methods isn't easy, isn't it? I've always been weak at writing, and it's been difficult to change that."

The results of the interviews showed that students found it challenging to write research proposals. He realised that this difficulty was his weakness. He found his writing skills challenging to change.

However, the questionnaire results showed that 95.3% of students got an average of 3.5-5.00 on the questionnaire. As many as 4.7% of students had an average of <3.00. This result shows that most students tend to have a growth language mindset.

Corrective Feedback Preferences of Students in Writing Scientific Texts

The results of corrective feedback preferences are presented as follows.

Table 5
Results of the Corrective Feedback Preference Questionnaire

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
Corrective Feedback Preference	43	3,928	4,857	4,461	,240	,058	-.524	,361	,043	,709
Explicit Correction + Metalinguistic Information	43	3.0	5.0	4,895	.3545	.126	-4,297	,361	20,463	,709
Type of Feedback	43	4,250	5,000	4,691	,228	,052	-.168	,361	-1.121	,709
Absence of Corrective Feedback	43	1.0	5.0	4,012	.8830	,780	-1.125	,361	1,817	,709
Prompt with Metalinguistic Clue	43	3.0	5.0	3,558	.5368	,288	,848	,361	,029	,709
Valid N (listwise)	43									

Table 5 demonstrates a high average corrective feedback preference (4.46). The highest average corrective feedback preference is explicit correction with metalinguistic information

(4.895). These findings indicate that students prefer explicit writing error correction with metalinguistic explanations about the error's location and form.

These findings are confirmed from the results of the interviews as follows.

> *"In my experience, clear and detailed lecturer input is very helpful for revision. For example, we give notes on our proposal, scribble the wrong parts, and perhaps comment on suggestions for improvement. Yes, because if it is written or conveyed clearly, I will understand what is wrong and how to fix it. It is not only saying that this does not seem right or wrong, but it is also unclear what is wrong. If the input is clear, I won't be confused about what next steps need to be revised."*

The interview excerpt shows that students have a preference for explicit corrective feedback. Students more easily understand concrete and detailed input. In this way, students know where their mistakes are, making it easier to revise their research proposals.

Interview results relate to how students approach lecture feedback. This finding is shown by the high average feedback type preference (4.691). In other words, students appreciate particular forms of corrective feedback: explicit correction by underlining or circling faults in scientific writing, making comments, and providing enough directions. Additionally, students value lecturers' discussions on student scientific writings to identify areas for improvement.

However, the average absence of corrective feedback is also relatively high (4,012). These findings indicate that students do not want lecturers to provide too much corrective feedback on their research proposals. With so much input, they felt overwhelmed to revise it.

The corrective feedback preference with the most minor average is *prompt with metalinguistic clues.* However, the average questionnaire results are still relatively high (3,558). The findings suggest that students prefer receiving metalinguistic information about errors in their research proposals to encourage them to self-correct.

Follow-up Strategy-Based on Lecturers' Corrective Feedback in Writing Scientific Texts

The results of *corrective feedback preferences are* presented as follows.

Table 6
Results of the Follow-up Strategy

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
Follow-up Strategy	43	2.66	5.00	4.30	,636	,405	-.733	,361	-.119	,709
Valid N (listwise)	43									

Table 6 reveals that the follow-up strategy based on lecturers' corrective feedback (4.30) is > 3.5, which is significant. This result demonstrates that students try to receive corrective feedback on their written scientific texts from lecturers. In this regard, an in-depth interview was conducted to explore information about students' strategies to follow up on their writings based on corrective lecturer feedback. Based on the result of the in-depth interview, students employ a diverse variety of follow-up strategies: students recheck the text, ask the lecturer for an explanation of the feedback, write points of feedback based on the type of input, identify parts of the proposal research that need more explanation, and record lecturer feedback. These findings are relevant to the following interview excerpt.

> *"When given the lecturer's input, I tried to understand. So, so that later you don't get confused about the revision. My strategy is to take voice record the lecturer's input if the lecturer allows it. If there's something you don't understand, I'll ask so*

you don't misunderstand. Usually, I note down the input points in my research proposal. Then, at the boarding house, I listened again to the input while checking and revising the input notes."

The interview results showed that students had a strategy for understanding corrective feedback from lecturers. The follow-up strategies used to make it easier for them to revise their research proposals, such as recording and noting lecturer input. This result shows that notes and recordings of lecturers' input can make it easier for them to understand and remember input from lecturers so that they do not have difficulties when revising.

Correlation of Language Mindset with Corrective Feedback Preference and Follow-up Strategy-based Corrective Feedback Preference

Correlation results of *language mindset* with corrective feedback preferences are presented as follows.

Table 7
Correlation of Language Mindset with Corrective Feedback Preference

		Language Mindset	**Corrective Feedback Preference**
Language Mindset	Pearson Correlation	1	,529**
	Sig. (2-tailed)		,000
	N	43	43
Corrective Feedback Preference	Pearson Correlation	,529**	1
	Sig. (2-tailed)	,000	
	N	43	43

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 shows the correlation between language mindset and corrective feedback preference using the Pearson Product moment formula because both variables are normally distributed. The correlation value is 0.529, which is relatively strong because the correlation value is between 0.41-0.70. So, Ho is rejected, while Ha is accepted. These findings show a significant relationship between language mindset and corrective feedback preference.

Table 8
Correlation of Language Mindset with Follow-up Strategy-Based Corrective Feedback Preference

			Language Mindset	**Follow-up Strategy based Corrective Feedback**
Kendall's tau_b	Language Mindset	Correlation Coefficient	1,000	,297**
		Sig. (2-tailed)	.	,009
		N	43	43
	Follow-up Strategy based Corrective Feedback	Correlation Coefficient	,297**	1,000
		Sig. (2-tailed)	,009	.
		N	43	43

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8 applies Kendall's tau-b formula to show the correlation between language mindset and follow-up strategy based on corrective feedback preference. The correlation is weak at 0.297 because the range is 0.20-0.399. Ha gets accepted, but Ho is refused. These findings demonstrate a correlation between language mindset and follow-up strategy based on corrective feedback.

Table 9
Correlation of Language Mindset with Follow-up Strategy

			Corrective Feedback Preference	Follow-up Strategy
Kendall's tau_b	Corrective Feedback Preference	Correlation Coefficient	1,000	,160
		Sig. (2-tailed)	.	,165
		N	43	43
	Follow-up Strategy	Correlation Coefficient	,160	1,000
		Sig. (2-tailed)	,165	.
		N	43	43

Using Kendall's tau-b formula, Table 9 displays the correlation between corrective feedback preference and follow-up strategy based on corrective feedback preference. Because the correlation value is between 0.000 and 0.199, 0.160 is weak. Ha gets rejected, but Ho is accepted. The result demonstrates that corrective feedback preference and follow-up strategy-based corrective feedback are not significantly related.

Discussion

Language Mindset of Students in Writing Scientific Texts

Research shows that students write research proposals with a growth language mindset. Students are confident in their language-learning dynamics for scientific writing so that they can improve their scientific writing. Previous research indicated that students believed linguistic intelligence could be modified (Vaghei et al., 2020). Students with a growth language mindset employ effective learning strategies and work hard to develop proficiency because they believe learning is easy. Despite obstacles, such students strive to solve issues (Bai et al., 2021; Lou & Noels, 2016b).

On the other hand, their disbelief that their language skills can change shows a fixed language mindset in students. They tend to see difficulties indicating they cannot improve their writing ability. Students with a fixed language mindset believe that language skills are fixed. Failure is a sign of low ability, and effort and practice are useless. Thus, they refuse to get involved in tasks they are not good at and tend to give up (Bai et al., 2021).

Nevertheless, students who possess a growth language mindset still encounter difficulties. There may also be a desire to cease authoring scientific texts. With learning environment support, these issues can be resolved gradually. Multiple students expressed their ability to compose a proficient research proposal, although they encountered difficulty articulating their plan verbally. Prior research indicates that linguistic attitude is not dichotomous because language learning success does not depend solely on effort or talent but on both (Shirvan et al., 2021).

This belief is formed from students' learning experiences during lectures. This research found that students participate in providing meaningful experiences in understanding and improving their scientific writing skills. These findings align with previous research stating that students' experiences in language courses shape their beliefs (Lou & Noels, 2017). Thus, different learning experiences have the potential to form different language mindsets. Other research proves that language mindset is dynamic because it can change depending on the learning experience one experiences (Shirvan et al., 2021).

Apart from that, students' second language aptitude beliefs were also proven to be high. These findings show that students believe their ability to write scientific texts can improve if they try. Previous research also proves that language learners are optimistic that they can master language skills through effort and hard work (Vaghei et al., 2020; Zarrinabadi et al., 2021). Previous research also found that students believe that they will have better learning

outcomes if they have enough time to practice writing so that their knowledge increases (Susilowati & Prihatini, 2023)

Students' Corrective Feedback Preferences in Writing Scientific Texts

Research findings show that students like feedback classified as explicit correction + metalinguistics information. In other words, students prefer clear, concrete, and detailed lecturer input by showing the location and details of errors in the research proposal. This explicit feedback is hoped to be accompanied by metalinguistic information because writing requires complex language processes and adequate grammatical knowledge (Prihatini et al., 2023). Previous research shows that 96% of teachers and 85% of students feel that feedback should be specific in explaining the form of errors (Mulliner & Tucker, 2017). Most teachers and students stated feedback should be timely, constructive, motivating, and directive, with metalinguistic comments, and provide detailed directions for further improvement (Hamid et al., 2021; Mulliner & Tucker, 2017).

Other data show that students consider corrective feedback from the lecturers, both written and oral feedback. The feedback students expect varies considerably. Most students expect error correction from teachers to highlight or circle mistakes and comment on their research proposal. The present research results are consistent with (Kim et al., 2020), who found that students preferred error correction over other types of corrective feedback from teachers. This finding also supports investigations highlighting that teachers' written or verbal feedback is the most effective and dominant (Mulliner & Tucker, 2017; Prihatini & Pangesti, 2023).

Students demand metalinguistic prompts for corrective feedback. Students want teachers to correct them, pushing them to reflect and improve their research suggestions. Thus, they can better understand and correct their study proposal errors. According to the current study, students deserve explicit comments on their writing errors and guidance on correcting them (Hamid et al., 2021; Prihatini & Pangesti, 2023). However, students feel overwhelmed when teachers provide excessive corrective feedback. This finding contradicts a previous study that showed students prefer comprehensive corrective feedback, especially for grammatical errors (Kim et al., 2020).

Thus, students' preference for corrective feedback reflects their approach to enhancing their competency (Papi et al., 2021). This finding contradicts earlier research showing that students prefer direct input and unfocused feedback (Fatima Zohra & Hamitouche, 2022). Because students have different corrective feedback preferences, this disparity arises. Every student expects appropriate input on their research proposal. In other words, feedback preferences vary significantly from person to person (Vaghei et al., 2021). Nevertheless, corrective feedback may distinguish between providing the correct form or initiating help through feedback without supplying the correct form to students (Hamid et al., 2021).

Follow-up Strategy Based on Lecturers' Corrective Feedback in Writing Scientific Texts

This research also found that the strategies used by students to follow up on lecturer input were greatly influenced by the type of input they received. Previous research also proves that students' strategies for handling feedback depend on the type of feedback given (Saito, 1994). It is in line with the finding of (Papi et al., 2021) that students consider the types of corrective feedback delivered by lecturers and design different follow-up strategies on their text for different types of corrective feedback. Students' main strategies are (1) rechecking their writing, (2) asking the lecturer to explain the feedback, (3) writing points of feedback based on the type of input, (4) identifying parts of the research proposal that need more explanation, and (5) recording lecturer input. This study differs from previous research that found students preferred the following feedback-handling strategies: writing down points by type, referring back to previous compositions, reviewing by incorporating teacher

comments, making mental notes, asking the teacher for explanations, doing nothing about errors, identifying the points to be explained, checking a dictionary or grammar book (Vaghei et al., 2021).

The findings of this research are relevant to previous research that the majority of 93% of students act on feedback, and 72% agree that they understand how to make the best use of their feedback (Mulliner & Tucker, 2017). Most students access, read, and act on feedback (Mulliner & Tucker, 2017). With corrective feedback, students can improve and produce more accurate text, thereby contributing positively to achieving writing competency (Shintani & Ellis, 2013). Improvements are made by reformulating language structure (Hanaoka & Izumi, 2012), listening carefully to the teacher's feedback on grammar, and noticing and correcting grammatical errors independently (Pawlak, 2018).

Correlation of Language Mindset with Corrective Feedback Preference and Follow-up Strategy in Writing Scientific Text

The correlation between language mindset and preference for corrective feedback shows a significant relationship in Indonesian Language Education students in writing scientific texts, especially research proposals. These findings show that students' mindsets contribute to facing challenges and difficulties in writing research proposals. Previous research also found that thought patterns are related to various motivational factors in the meaning interpretation system that drive students' emotional responses and behavioural actions in various situations (Lou & Noels, 2019). Other research has found that optimising a growth mindset can foster a more robust mindset that impacts psychological and behavioural processes that influence learning outcomes (Burnette et al., 2022).

This study discovered that students with a high-growth language mindset focused on problem-solving. They employ several methods to improve their research proposal writing. However, fixed language students view problems as evidence that they cannot compose a research proposal. Previous research found that a growth mindset predicted language learning practices (Bai et al., 2021). Students with a growth mindset towards language learning prefer receiving various forms of corrective feedback. In contrast, students with a fixed language mindset receive only brief conversations or no corrective feedback (Papi et al., 2021). So, students' language mindset about writing also determines their preferences for corrective feedback (Shirvan et al., 2021).

A growth mindset predicts most learning outcomes (Papi et al., 2019). Therefore, fixed language mindsets experience more anxiety in language use (Khajavy et al., 2022; Lou & Noels, 2019). Meanwhile, a growth language mindset increases enjoyment in language practices (Khajavy et al., 2022). Therefore, with monitoring feedback, a growth mindset emerged as the first and only significant predictor (Papi et al., 2019).

This research supports prior results that students with a growth language mindset establish trial-and-error learning goals to increase their competencies (Lou & Noels, 2017). They view feedback as a valuable learning resource because mistakes can be corrected, and learning can be used (Papi et al., 2021). A growth language mindset provides confidence and motivation in students to carry out independent learning strategies (self-regulated learning) by determining learning goals, business regulation, and monitoring their learning achievements (Bai & Wang, 2023; Xu & Wang, 2022). Previous research has proven that writing motivation correlates with feedback-seeking orientation (Waller & Papi, 2017) to improve their writing skills. Therefore, students with a growth mindset perform better in writing than students with a fixed language mindset (Lee et al., 2023). Therefore, the writing process must encourage student motivation by developing growth mindsets towards writing and integrative motivation (Shirvan et al., 2021; Xu & Wang, 2022).

CONCLUSION

Based on the results, it can be concluded that Indonesian Language Education students at the University of Muhammadiyah Malang tend to have a growth language mindset with an average questionnaire result of 4.573. A growth language mindset is higher among 95.3% of students, with an average questionnaire score of 3.5-5.00. These data show that students believe they can improve their research proposal writing skills if they attempt to do so. Corrective feedback provided by lecturers, especially explicit corrections, becomes students' preference in improving their research proposals. This result also shows that students have high-level follow-up strategies in writing scientific texts.

The results show a significant correlation between language mindset and corrective feedback preference (0.529). On the other hand, there is also a correlation between language mindset and follow-up strategy-based corrective feedback (0.297), although it tends to be weak. However, corrective feedback preference with follow-up strategy-based corrective feedback did not show a relationship (0.160). These findings show that if language mindset is high, students also prefer feedback and student follow-up strategies in writing research proposals. Therefore, the results of this research can be implemented practically by considering students' language mindset and corrective feedback preferences in providing input on students' scientific texts. Scientific text writing guidance activities need to encourage an increase in students' growth language mindset. In this way, students can increase their confidence that their scientific writing skills can improve.

However, there are still limitations to this research. First, this research was conducted in one class at one university, so further research is recommended to use a much larger sample from various universities. Second, this research has not identified a correlation between language mindset and corrective feedback preferences with the ability to write scientific texts, so further research can examine this topic.

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