A CORRELATIONAL STUDY OF LANGUAGE LEARNING STRATEGIES AND LEARNER AUTONOMY AMONG GRADUATE STUDENTS IN ENGLISH EDUCATION IN INDONESIA

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Abstract: Various studies have highlighted the significance of language learning strategies in enhancing language competence. However, studies specifically examining the correlation between these strategies and learning autonomy are limited, particularly among graduate students in Indonesia. This study seeks to address this gap by examining the correlation between language learning strategies and learning autonomy among graduate students. Using quantitative methods, this study involved a correlation design on 136 graduate English language students at a state university in Indonesia. The instruments used were the Strategy Inventory for Language Learning (SILL) questionnaire developed by Oxford (1990) and the Learner Autonomy (LA) questionnaire developed by Chan and Spratt (2002). The analysis of the data involved descriptive statistics and Pearson product-moment correlation. The results

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revealed that the majority of graduate students utilized metacognitive strategies more frequently to acquire English skills, and they demonstrated a high level of autonomy. Furthermore, researchers discovered a positive correlation between language learning strategies and learner autonomy. The implications of this study indicate that the use of language learning strategies contributes to supporting learner autonomy. Therefore, it is important for educational institutions and lecturers to design curricula and learning activities that encourage the application of relevant strategies and the development of student autonomy. This not only helps students become more autonomous in the learning process, but also improves the effectiveness of English language acquisition among graduate students.

Keywords: *language learning strategies, learner autonomy, English language acquisition, postgraduate student*

INTRODUCTION

One key factor in learning English is the application of effective language learning strategies (LLS). These strategies are intentional acts students undertake to assist in acquiring a new language (Oxford, 1990). These strategies involve actions and methods chosen by students to support their learning and understanding of English (O'Malley & Chamot, 1991). Oxford (1990) classifies LLS into two primary categories, namely direct and indirect strategies. Direct strategies refer to directly involved language in learning consisting of memory strategies (helping to remember and retrieve information), cognitive strategies (facilitate understanding and processing of language information.), and compensation strategies (overcoming language limitations). Meanwhile, indirect strategies are strategies that accommodate and regulate language learning devoid of direct involvement with the language being learned consisting of metacognitive strategies (planning and organizing the process of learning), affective strategies (handling emotions and maintaining

motivation towards learning), and social strategies (involving interaction with others).

Utilizing these strategies is crucial to simplifying the process of understanding, mastering, and developing language skills for students (Alfian, 2021). In addition, this strategy involves planning, self-evaluation, and choosing the suitable learning method to help students master English (Daflizar et al., 2022). However, many graduate students still do not understand how to integrate these strategies into their daily learning activities, which often results in a lack of progress in their mastery of English (Nurharjanto & Widyantoro, 2020). Insufficient awareness of the value of utilizing LLS becomes a challenge in the learning process. This low awareness could be attributed to a lack of information and application regarding language learning strategies (Oxford, 2017). Therefore, teachers must provide guidance and introduce these strategies to students (Polatcan et al., 2021). Thus, it is hoped that students can utilize the appropriate strategies to optimize their English learning.

Learner autonomy (LA) has surfaced as a crucial aspect of facilitating language acquisition, especially in higher education (Tsai, 2019). Learner autonomy refers to learning that requires students to be able to handle their learning independently (Holec, 1981). Chan and Spratt (2002) explained that learning autonomy is the skill of handling, regulating, and motivating oneself during learning and being responsible for the outcomes of one's achievements. Furthermore, Iamudom and Tangkiengsirisin, 2020) asserted that to cultivate learner autonomy, students must generate responsibility awareness and actively participate in determining their own learning choices. Thus, developing learner autonomy not only increases students' engagement and motivation, but also strengthens their capacity to manage the learning independently.

Chan and Spratt (2002) explained that components that support learner autonomy, namely abilities and activities inside and outside the classroom. Syafryadin et al. (2022) revealed that ability refers to students' skills in understanding and managing their learning process.

Apart from that, abilities also include skills in selecting relevant learning resources, organizing information well, and planning effective learning strategies in learning. In addition, Chan and Spratt (2002) explained that there are supporting components in increasing student autonomy, namely inside and outside activities.

Inside activities are carried out in a more controlled environment, commonly in the classroom or with the teacher's direct guidance. Meanwhile, outside activities are carried out outside the environment without direct supervision from the teacher, and students have more control over their learning process (Chan and Spratt, 2002). Although different in the context of supervision, these two components are interrelated and support each other. Learning autonomy can be formed and developed by combining abilities with various activities both inside and outside the learning environment. To assess the level of learner autonomy, this study adopts the value interpretation criteria developed by Swatevacharkul and Boonma (2021). These criteria use a 5-point Likert scale, which provides a structured approach to interpreting students' autonomy levels based on their responses.

In the context of English or second language learning, learner autonomy represents students' capability to proactively find and apply additional resources to deepen their understanding of learning the target language (Muhammad, 2020). This ability also impacts students' English language proficiency, who are often involved in various academic tasks that require effective use of English to understand the material, communicate, and access relevant literature in their second language (Begum, 2019).This situation allows students to contribute and actively organize their learning process. However, some graduate students still face challenges in developing learning autonomy due to a lack of intrinsic motivation, which leads to reluctance to take responsibility or initiative in the learning process (Irgatoğlu et al., 2022). Additionally, their dependence on teachers' instructions can limit their opportunities to make independent decisions during the learning process (Wang & Ryan, 2020). Despite this, autonomous learning still requires teachers to be facilitators who not only provide

information and instructions but also create an environment that encourages students to become autonomous learners (Samaie et al., 2015).

In higher education in Indonesia, particularly among graduate students majoring in English, understanding the correlation between LLS and LA is crucial. The strategy is one element that makes students take ownership of their learning, thus making them autonomous learners (Dickinson, 1987). Implementing of appropriate language learning strategies is crucial to improving comprehension and mastery of the target language when learning English. It can even reinforce a more autonomous learning system and improve their ability to learn English more effectively (Iamudom & Tangkiengsirisin, 2020). Therefore, understanding the relationship between these two is essential to provide valuable insights into how graduate English students can master English language skills and their autonomy in learning.

Several prior studies relate to this research. The initial study is by Daflizar et al. (2022). This study seeks to discover the connections among strategies for language learning and autonomy in 76 undergraduate students majoring in English at universities in Indonesia. The findings demonstrate that Indonesian undergraduate students predominantly use metacognitive strategies, and they hold a favorable perception of their autonomous learning abilities in their English activities, whether inside or outside the classroom. The research further revealed that students' levels of autonomy increased with the number of strategies for language learning they employed.

The second study based on Bećirović et al. (2021) examined how strategies of language learning were associated with variables such as academic performance, level of grade, and gender identity. This research intends to uncover the diverse strategies students often adopt when studying English. Participants were 206 high school students in Bosnia and Herzegovina who were selected utilizing stratified random sampling. The findings indicate that cognitive strategies contribute positively to enhancing student achievement. GPA significantly

influences the use of strategies, whereas gender and grade level have no noticeable impact. Metacognitive strategies are the most frequently applied, while affective strategies are the least utilized.

The last is research conducted by Rezalou and Altay (2022). They explore the association between autonomy among learners and foreign language achievement and whether age and gender influence strategy utilization. The study involved 150 EFL students enrolled at Hacettepe University in Turkey, selected by random sampling technique. The findings reveal that students commonly use metacognitive strategies, which aid in managing their learning process and enhance their achievement in a foreign language. Moreover, both male and female participants, regardless of age, apply similar learning strategies without any significant differences.

The contrast between this research and prior studies lies in the location where the research was conducted. This research places its focus on Indonesia, a context where research on the relationship between LLS and LA is still relatively rarely conducted simultaneously, so this research is essential because it contributes knowledge that is more local and relevant to conditions in Indonesia. The second difference lies in the participants. This research focuses explicitly on graduate students who are studying English education at a state university in Indonesia. Given the different dynamics and learning needs at the postgraduate level, this study is essential to provide more specific and relevant insights for higher education. That is what differentiates this research from previous research.

The outcomes of this research are expected to deepen the insight into learning dynamics in the context of higher education in Indonesia and provide new insights that have not been widely explored. This study fills the gap in the literature to further explore the correlation between language learning strategies and learning autonomy among graduate students in the context of Indonesian higher education. Furthermore, this study also investigated the types of language learning strategies most employed by students and their level of

learning autonomy. To achieve the objectives of this research, several research questions that will be answered are:

1. What types of language learning strategies are most employed by graduate students in learning English?
2. How autonomous are graduate students in learning English?
3. How is the correlation between language learning strategies and the autonomy of graduate students?

METHOD

Research Design

This study applies a quantitative approach by utilizing correlation analysis to explore the correlation between language learning strategies and learner autonomy. Creswell (2012) characterizes quantitative research as a descriptive approach that involves analytical methods and aims to gain understanding of the things observed, obtain new theories, and test a relationship between variables. Meanwhile, correlation study is a type of data collection that examines the connection and strength of an association among multiple variables. This study has two variables, namely language learning strategies as independent variables and learner autonomy as dependent variables.

Population and Sample

The research took place in the postgraduate English language education program at a state university in Yogyakarta, Indonesia. The population of this study was 206 graduate students majoring in English language education. However, not all these students were active because some of them withdrew or took leave so that they were considered inactive. Therefore, the researcher used the Slovin formula as a reference in sampling for this study. This formula aims to provide an estimate of the representative sample size of a larger population and make reliable generalizations that can represent the population. Based on the calculation, 136 graduate students were obtained as samples who participated in this study. The technique used to select the sample was simple random sampling. Simple

Random sampling ensures everyone within the populations has an identical opportunity to be picked as a sample (Creswell, 2012). Initially, the researchers requested the participants' consent to fill out a questionnaire, then described the study's intent and distributed the questionnaire to a randomly selected sample.

Instruments

This study used two questionnaires as instruments to explore the strategies that students commonly utilized for language learning, how autonomous they were, and what the correlation between these two variables was. The first questionnaire was the Strategy Inventory for Language Learning (SILL), designed by Oxford (1990), which consisted of 50 items that were grouped into six categories: memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies. The second questionnaire was the Learner Autonomy (LA) questionnaire, formulated by Chan and Spratt (2002), which consisted of 30 items. These items were categorized into two components: ability and activities both inside and outside the classroom. The researchers modified some items in the questionnaire to better fit the context of the study, ensuring relevance to the participants' experiences. The full versions of both questionnaires, including their components and indicators, were provided in the appendix.

The level of learner autonomy was assessed using a 5-point Likert scale following the criteria mentioned in the background section, adapted from Swatevacharkul and Boonma (2021). This adaptation was made to avoid neutral options and encouraged respondents to provide more assertive answers regarding their level of autonomy. Therefore, adjustments were made based on the proportional division of the value range to ensure that each category reflected a clear and consistent level of autonomy. The adjusted interpretation criteria were 3.26 - 4.00, indicating a very high level; 2.51 - 3.25, indicating a high level; 1.76 - 2.50, indicating a moderate level; and 1.00 - 1.75, indicating a low level. Both questionnaires had been tested for validity and

reliability to ensure data accuracy. The validity test results demonstrated that every item on the instrument was confirmed to be valid, and the Cronbach's alpha value obtained from the reliability test was 0.924 for the SILL questionnaire and 0.939 for the LA questionnaire.

Data Collection Procedure

The researchers collected data in several steps. The first step was to modify the LA and SILL questionnaires to suit the context and research objectives. The second step was to combine the two questionnaires into one on Google Forms to simplify the distribution process. The third step was to distribute the questionnaire via personal chat on WhatsApp because learning was still carried out in a hybrid manner, making it impossible to distribute the questionnaires directly. The fourth step was to ask participants to fill out the questionnaire by responding appropriately to each statement. Lastly, Google Forms automatically compiled all the data provided in the questionnaire so that the researchers could conduct data analysis.

Data Analysis

The collected data were then processed utilizing descriptive statistical analysis and Pearson product-moment correlation. Descriptive statistical analysis was used to ascertain the most utilized language learning strategies by students by looking at the calculation of mean score and standard deviation. This analysis was also used to assess the level of learning autonomy among graduate students in learning English, whether it tended to be high, moderate, or low. Meanwhile, Pearson product-moment correlation was employed to examine the correlation between language learning strategies and learner autonomy, whether the data showed a positive or negative correlation.

FINDINGS

This section presents research findings related to LLS and the level of learner autonomy among graduate students. In addition, the correlation between the two variables is presented to determine the extent to which the LLS applied were related to learner autonomy in their learning process.

The Result of Language Learning Strategies
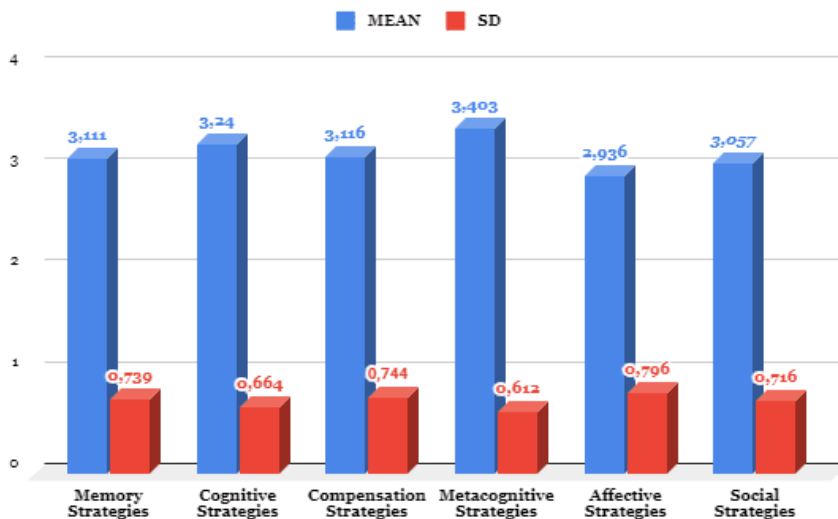
Figure 1. Findings on the Average Scores in Language Learning Strategies

Descriptive statistics were applied to ascertain the strategies often applied by English students pursuing graduate studies at one of the state universities in Indonesia. The 136 students actively participated in this study and filled out the questionnaire completely. The overall data analysis showed that the majority of participants chose metacognitive strategies as the main choice when learning English (M = 3.403, SD = 0.612). Meanwhile, the affective strategy domain was identified as the strategy that students most rarely apply when learning English (M = 2.936, SD = 0.796).

Memory Strategy

Table 1. The Descriptive Statistics of Domain Memory Strategy

Item Number	Statement	N	Mean Score	SD
1	I think of relationships between what I already know and new things I learn in English	136	3.558	0.513
2	I use new English words in a sentence so I can remember	136	3.463	0.607
4	I remember a new word by taking a mental picture of a situation in which the word might be used	136	3.404	0.607
8	I review English lessons often	136	3.235	0.611
3	I connect the sound of a new English and an image of the word to help me remember the word	136	3.102	0.743
7	I physically act out new English words	136	3.007	0.890
9	I remember new words or phrases by remembering their location on the page, on the board	136	2.970	0.833
6	I use flashcards to remember new English words	136	2.647	0.915
5	I use rhymes to remember new English words	136	2.610	0.862

There were nine items related to the memory strategy domain from item 1 to 9. From the data presented in the table, it can be seen a strategy most often adopted by students in this domain was item 1 (M = 3.558, SD = 0.513) which related to students trying to connect the knowledge they already had with new information or concepts they learned in English to strengthen their understanding. Whereas the least used strategy by students was found in item 5 (M= 2.610, SD= 0.862) relating to students utilizing rhyming techniques such as rhythms and patterns as memory aids to recall information. This activity was rarely done by graduate students because they are more inclined to use other proven or more commonly used methods such as in item 1. Total mean in the memory strategy domain (M = 3.111, SD = 0.739).

Cognitive Strategies

Table 2. The Descriptive Statistics of Domain Cognitive Strategies

Item Number	Statement	N	Mean Score	SD
12	I practice the sounds of English	136	3.588	0.523
11	I try to talk like native English speakers	136	3.485	0.620
15	I watch English language TV shows or go to movies spoken in English	136	3.419	0.650
22	I try not to translate word-for-word	136	3.367	0.675
18	I first skim an English passage (read it quickly) then go back and read carefully.	136	3.360	0.651
16	I read for pleasure in English	136	3.352	0.590
13	I use the English words I know in different ways	136	3.308	0.649
20	I try to find patterns in English	136	3.242	0.693
10	I say or write new English words several times	136	3.220	0.685
14	I start conversations in English	136	3.161	0.680
17	I write notes, messages, letters, or reports in English	136	3.007	0.683
21	I find the meaning of an English word by dividing it into parts that I understand	136	2.992	0.725
23	I make summaries of information that I hear or read in English	136	2.970	0.729
19	I look for words in my own language that are similar to new words in English	136	2.882	0.740

Most students chose item 12 in the cognitive strategies domain as the strategy dominant utilized by students when learning English (M = 3.588, SD = 0.523), which related to students practicing improving the way they pronounce words and sentences in English. This could have involved practicing by reading texts or listening to voice recordings to improve their ability to pronounce words more clearly and precisely. Meanwhile, item 19 was the strategy most infrequently utilized among students (M = 2.882, SD = 0.740) which related to students looking for words in Indonesian that have similarities with English words, both in

terms of meaning, spelling, and pronunciation. Average score in the cognitive strategy domain (M = 3.240, SD = 0.664).

Compensation Strategies

Table 3. The Descriptive Statistics of Domain Compensation Strategies

Item Number	Statement	N	Mean Score	SD
29	If I can't think of an English word, I use a word or phrase that means the same thing.	136	3.301	0.636
24	To understand unfamiliar English words, I make guesses.	136	3.294	0.678
25	When I can't think of a word during a conversation in English, I use gestures.	136	3.272	0.774
26	I make up new words if I do not know the right ones in English	136	3.110	0.804
28	I try to guess what the other person will say next in English	136	2.919	0.740
27	I read English without looking up every new word	136	2.801	0.832

The compensation strategy domain comprised six items. One that students applied most frequently when studying English was item 29 (M = 3.301, SD = 0.636) which referred to students using synonyms or looking for alternative words or phrases in English that have the same or similar meaning, if they could not remember the word right at that time. Meanwhile, item 27 is the strategy that was least applied by students (M = 2.801, SD = 0.832) related to when students read English literature, they are able to understand the text as a whole without having to look at a dictionary or find out what each word means that has never been encountered before. The total mean score for items in this domain (M = 3.116, SD = 0.744).

Metacognitive Strategies

Table 4. The Descriptive Statistics of Domain Metacognitive Strategies

Item Number	Statement	N	Mean Score	SD
33	I try to find out how to be a better learner of English	136	3.676	0.485
32	I pay attention when someone is speaking English	136	3.654	0.562
31	I notice my English mistakes and use that information to help me do better	136	3.544	0.528
38	I think about my progress in learning English	136	3.477	0.570
37	I have clear goals for improving my English skills	136	3.433	0.604
30	I try to find as many ways as I can to use my English	136	3.338	0.623
36	I look for opportunities to read as much as possible in English	136	3.286	0.654
35	I look for people I can talk to in English	136	3.250	0.696
34	I plan my schedule so I will have enough time to study English	136	2.970	0.788

The metacognitive strategies domain table above showed that item 33 was selected by most students as their strategy and this strategy had the largest average among the other strategy domains (M = 3.676, SD = 0.485) related to students' efforts to find the appropriate strategy or way to improve their abilities in studying English. These efforts included understanding and applying techniques to help them master English more quickly, efficiently, and effectively. Then, item 34 was the strategy most infrequently utilized among students (M = 2.970, SD = 0.788) related to students managing their time and activities so that they can allocate sufficient time to learn English. However, this activity is rarely carried out because students may face challenges in setting priorities and lacked skills in managing time effectively. Average score for items in the metacognitive strategy domain (M = 3.403, SD = 0.612).

Affective Strategies

Table 5. The Descriptive Statistics of Domain Affective Strategies

Item Number	Statement	N	Mean Score	SD

39	I try to relax whenever I feel afraid of using English.	136	3.485	0.596
40	I encourage myself to speak English even when I am afraid of making a mistake	136	3.448	0.594
42	I notice if I am tense or nervous when I am studying or using English	136	3.073	0.883
44	I talk to someone else about how I feel when I am learning English	136	2.683	0.875
41	I give myself a reward or treat when I do well in English	136	2.507	0.973
43	I write down my feelings in a language learning diary	136	2.419	0.856

There were six items on effective strategies consisting of items 39 to 44. Students in this domain predominantly used item 39 as their strategy of choice (M= 3.485, SD= 0.596) regarding students trying to stay calm and not stressed whenever they felt anxious or afraid when using English. This indicated an attempt to overcome tension or anxiety that might have arisen when communicating in a language that they had not yet fully mastered. Meanwhile, item 43 was the strategy that students least used to learn English (M= 2.419, SD= 0.856) regarding students recording their experiences, thoughts or feelings regarding the process of learning English in a diary. Due to graduate students have quite busy activities, they assumed and felt they did not have time for additional activities like these. Overall, the average score for the affective strategy domain was (M= 2.936, SD= 0.796).

Social Strategies

Table 6. The Descriptive Statistics of Domain Social Strategies

Item Number	Statement	N	Mean Score	SD
49	I ask questions in English	136	3.301	0.600
50	I try to learn about the culture of English speakers	136	3.301	0.670
47	I practice English with other students	136	3.213	0.703

45	If I do not understand something in English, I ask the other person to slow down or to say it again	136	3.198	0.686
46	I ask English speakers to correct me when I talk.	136	2.955	0.796
48	I ask for help from English speakers	136	2.375	0.842

There were six items in the social strategy domain in items 45 to 50. The strategy most often chosen by students was item 49 (M = 3.301, SD = 0.600), which related to students asking questions and requesting information using English. This showed that students tended to be active in communicating directly using English to obtain information or ask for clarification about something. Meanwhile, the strategy that was least used by students was found in item 48 (M= 2.375, SD= 0.842) regarding students asking for assist from someone who is a native English speaker or from a teacher who taught English. Overall, the average score in the social strategy domain (M = 3.057, SD = 0.716).

The Learner Autonomy
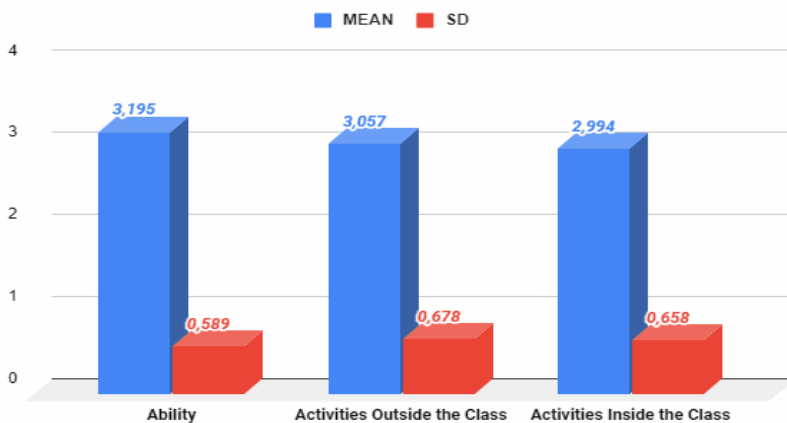
Figure 2. Findings on the Average Scores in Learner Autonomy

The graph above showed the overall average score for each domain of learner autonomy. The ability domain had the highest average value compared to the other domains (M = 3.195, SD = 0.589). The domain of activities outside the classroom was ranked second (M = 3.057, SD =

0.678). Meanwhile, the domain of activity in the classroom was ranked third (M = 2.994, SD = 0.658).

Table 7. The Descriptive Statistics of and level of Student Autonomy for each Domain

Domain	N	Mean Score	SD	Level
Ability	136	3.195	0.589	High
Activities Outside the Classroom	136	3.057	0.678	High
Activities Inside the Classroom	136	2.994	0.658	High
All Domains	**136**	**3.082**	**0.641**	**High**

The overall average value of all domains of learner autonomy was M = 3.082 with SD = 0.641. Based on the criteria of the level of learner autonomy in the table 1, it showed that the value is in the range of 2.51 - 3.25. This implied that graduate students demonstrated a high level of autonomy, which means they had a good ability to organize and control their learning process autonomously. In addition, each domain of learner autonomy was also at a high level, indicating consistency in the ability of learning autonomy in various aspects.

Ability

Table 8. The Descriptive Statistics of Domain Ability

Item Number	Statement	N	Mean Score	SD	Level
6	My ability to choose learning materials outside the classroom.	136	3.330	0.571	Very High
4	My ability to choose learning goals outside the classroom	136	3.294	0.532	Very High
9	My ability to identify my weaknesses in English.	136	3.286	0.607	Very High
2	My ability to choose learning activities outside the classroom	136	3.279	0.616	Very High
10	My ability to decide what to learn next in my English lessons.	136	3.227	0.620	High
5	My ability to choose learning goals outside the classroom	136	3.227	0.543	High

1	My ability to choose learning activities in class.	136	3.205	0.545	High
3	My ability to choose learning objectives in class.	136	3.154	0.542	High
8	My ability to evaluate my subjects/course.	136	3.080	0.571	High
7	My ability to evaluate my learning	136	3.073	0.616	High
11	My ability to decide how long to spend on each activity.	136	2.985	0.719	High

The ability domain in learner autonomy consisted of eleven items. Item 6 was the highest ability and is mostly chosen by students (M = 3.330, SD = 0.571) related to students' capability to choose suitable study materials or resources for learning outside the classroom. This item was in the very high category, which shows that students had very high autonomy in searching for and selecting additional learning materials that can support their learning process effectively outside formal class hours.

Compared to all items, item 11 was in the lowest position or the least chosen by students in this domain (M = 2.985, SD = 0.719), related to students being able to determine the correct duration or time needed to complete each activity. However, item 11 is included in the high category, which shows that, in general, students had a good level of autonomy in managing time to complete their tasks. Overall, the total average of all items in the ability domain (M = 3.195, SD = 0.589) was included in the high category.

Activities Outside the Classroom

Table 9. The Descriptive Statistics of Domain Activities Outside the Classroom

Item Number	Statement	N	Mean Score	SD	Level
19	Listened to English songs	136	3.558	0.541	Very High
24	Used the internet in English	136	3.514	0.544	Very High
22	Done English self-study	136	3.485	0.516	Very High
17	Watched English TV programs or English movie	136	3.360	0.616	Very High

14	Read English notices around you	136	3.279	0.592	Very High
21	Practiced using English with friends	136	3.169	0.590	High
12	Read grammar books on your own	136	3.161	0.646	High
16	Read books, news, or magazine in English	136	3.117	0.621	High
20	Talked to foreigners in English	136	3.051	0.702	High
13	Noted down new words and their meanings	136	3.000	0.760	High
25	Gone to see your teacher about your work	136	2.794	0.721	High
15	Sent e-mails in English	136	2.764	0.742	High
18	Listened to English radio	136	2.375	0.926	Moderate
23	Written a diary in English	136	2.169	0.970	Moderate

The table in the activities outside the classroom domain above indicated that that item 19 was the most popular choice among students, which is included in the very high category (M = 3.558, SD = 0.541). This item is related to students who choose the activity of listening to English songs This uncovered that student possessed a high interest in using music media to bolster their study of English. This activity supported them in increasing their English vocabulary and learning correct pronunciation. This showed that students were interested in using interesting and fun media as a means of learning English.

Meanwhile, a few students chose item 23 (M = 2.169, SD = 0.970), which is related to students writing diaries or personal journals using English. The level of student learner autonomy in this item was included in the moderate category, which showed that although some students were involved in this activity, in general, the activity of writing diaries in English was not the main choice for many students. This may have indicated that students preferred other methods that were considered easier or more interesting in supporting the English learning process. Then, the total average value of each domain of

activities outside classroom (M = 3.057, SD = 0.678) was included in the high category.

Activities Inside the Classroom

Table 10. The Descriptive Statistics of Domain Inside Class Activities

Item Number	Statement	N	Mean Score	SD	Level
27	Noted down new information	136	3.235	0.669	High
30	Discussed learning problems with classmate	136	3.235	0.599	High
29	Taken opportunities to speak in English.	136	3.205	0.545	High
26	Asked the teacher questions when you don't understand.	136	3.132	0.641	High
28	Made suggestion to the teacher.	136	2.161	0.836	Moderate

The domain activities inside class consisted of five items. There were 2 items that have the highest average value, namely the first item 27 (M = 3.235, SD = 0.669) related to students noting or recording new information obtained during the process of studying English. Then the second item is item 30 (M = 3.235, SD = 0.569), which was related to students discussing or talking with their classmates about various problems or challenges they faced in learning. Both items were included in the high learner autonomy level category.

Meanwhile, item 28 contained the activity that students utilized least frequently and received the lowest score (M = 2.161, SD = 0.836), which was related to students providing input, ideas, or recommendations to teachers regarding various aspects of the learning process. This item was included in the moderate category which shows that although there are some students involved in providing feedback to teachers, this activity was not a common practice among students. This may have indicated the need to increase opportunities or encouragement for students to engage more actively in the learning process. Overall, the total mean score for all domains of activities inside class (M= 2.994, SD= 0.658) was in the high category.

The Correlation between Language Learning Strategies and Learner Autonomy

Researchers also conducted a Pearson correlation analysis to investigate whether graduate students' utilization of language learning strategies is positively or negatively pertaining to their level of learner autonomy. Below are the results of the data obtained by researchers:

Table 11. The Correlation between Language Learning Strategies and Learner Autonomy

		Language Learning Strategies	Learner Autonomy
Language Learning Strategies	Pearson Correlation	1	.722[**]
	Sig. (2-tailed)		0.000
	N	136	136
Learner Autonomy	Pearson Correlation	.722[**]	1
	Sig. (2-tailed)	0.000	
	N	136	136

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

The value 0.05 is a value that is generally used as a significance limit or level of confidence in statistics or is referred to as the 5% significance level. In the context of correlation, when a research result has a p-value (probability value) is under 0.05 (p-value < 0.05), then Ha is accepted and considered significant or correlated and vice versa. The two variables from the data above have a p-value or sig value of 0.000, indicating that the sig value is less than 0.05 (0.000 < 0.05), meaning there is association between the two variables.

The Pearson correlation of the two variables is 0.722, which is close to +1 and is considered a strong correlation between the two variables. This strong relationship shows a close association between language learning strategies and learner autonomy. Then, the value of 0.722 is positive, indicating a unidirectional relationship or positive correlation. This positive value can be interpreted as meaning that the more active and effective students' utilization of language learning strategies, the higher their learning autonomy. Thus, the results of this research show a positive correlation between the language learning

strategies and learner autonomy among graduate students pursuing English language education at a state university in Yogyakarta, Indonesia.

DISCUSSION

This study intends to ascertain which language learning strategies are most frequently utilized by graduate students and how their autonomy. In addition, researchers investigated the correlation between these two aspects. Therefore, this section further develops the analysis related to the findings previously revealed and links them to theory and other relevant research to deliver adequate answers to the research questions.

Language Learning Strategy

The initial research question concerning language learning strategies widely utilized by graduate students studying English was analyzed utilizing descriptive statistics. The findings showed that most graduate students majoring in English at Yogyakarta State University choose metacognitive strategies (M = 3.403, SD = 0.612) as the most widely utilized strategy. Metacognitive strategies help students design, manage, monitor, and assess the process through which they learn English autonomously (O'Malley & Chamot, 1991). Through these strategies, students can take charge of regulating their learning activities, such as organizing study time, determining study goals, monitoring their progress, and identifying and overcoming learning difficulties they face (Yusuf & Kasim, 2019). This shows that most students have good awareness and handle their learning processes. Metacognitive strategies allow them to assume more accountability for their learning, which resonates with the principle of learning independence or learner autonomy.

The involvement of metacognitive strategies in students' academic activities, such as research writing, thesis, or other academic tasks, can help them to plan a structured timetable, carefully select research topics, manage relevant international literature sources, and

periodically evaluate their progress. These strategies also help students deal with the complexity of academic tasks in a more organized and focused manner, thus helping them to overcome challenges and achieve academic goals better. Therefore, this strategy not only contributes well to the improvement of students' English language acquisition but also helps students be more competent and confident in using the language in their various academic contexts.

This result reflects consistency with findings from previous research (Bećirović et al., 2021; Daflizar et al., 2022; Rezalou & Altay, 2022), revealing that metacognitive strategies see the highest usage among students. This shows consistency in findings and research highlighting the function of metacognitive strategies contributing to learning English. Metacognitive strategies contribute to aiding students in determining how they learn, setting learning goals, reflecting on their understanding of the material, and evaluating the strategy they use in learning English (Rezalou & Altay, 2022). Thus, the results of this study not only reinforce previous findings but also add to the understanding of the prevalence and effectiveness of metacognitive strategies in supporting students' English language learning progress.

However, as time goes by, these findings will be different and experience progress and changes from previous research, such as Iamudom and Tangkiengsirisin (2020) and Samaie et al (2015) have different findings in different participant contexts. In research, Iamudom and Tangkiengsirisin (2020) found that most state school EFL students in Thailand often used compensatory strategies and international school students mostly used cognitive strategies to learn English. Meanwhile, research findings by Samaie et al. (2015) discovered that male students' primary strategy for learning English is cognitive, while female students favor memory strategies.   These differences in findings do not negate the conclusion that one strategy is better than the other, instead, it shows that the variation in the strategies students utilize for learning English is affected by multiple

factors, including learning context, school type, educational level, and individual characteristics.

Learner Autonomy

The second question concerns how autonomous EFL graduate students are when learning English. The researcher found that EFL graduate students have a high level of autonomy, as seen from the results of descriptive statistical data showing the value of the students' ability domain in the high category (M = 3.195, SD = 0.589). This proves that they have high or good ability to organize their learning. They can make the right decisions regarding learning strategies, setting learning objectives, and evaluating their progress, all of which contribute to their success in learning English. Syafryadin et al. (2022) revealed that the ability of students can influence the extent to which they can become autonomous learners. This ability is especially essential for English learning, where students need to rely on themselves to practice and deepen their understanding of English both outside the classroom environment and inside the classroom.

The results also highlighted that the domain of activities for learning outside the classroom was included in the category of high levels of learner autonomy (M = 3.057, SD = 0.678). Activities outside the classroom are students' ability to organize and direct their learning process without much help from teachers or others (Chan & Spratt, 2002). This shows that students can take the initiative in their learning process autonomously outside the formal classroom environment. They tend to have greater control over their learning, including goal setting, choosing learning strategies, and evaluating their progress. This is consistent with the view expressed by Muhammad (2020) that students with high autonomy can manage their studies without teacher involvement. This high level of autonomy reflects students' ability to assume ownership of their learning progress, an essential indicator of learner autonomy development.

The domain of activities inside the classroom was ranked third in supporting students' learner autonomy in learning English. This

domain is included in the category of high level of learner autonomy (M = 2.994, SD = 0.658). Activities inside the classroom refer to learning activities and interactions that occur in a more controlled classroom environment under the supervision of the teacher (Chan & Spratt, 2002). Although under teacher supervision, this activity provides a possibility for students to progress their learning autonomy through active participation in discussions, recording information, and completing assignments (Daflizar et al., 2022). The teacher's responsibility is to motivate students to employ the target language more actively assisting students to shift from entirely teacher-directed to more autonomous learning or self-directed learning (Little et al., 2017). This shows that a structured classroom environment can still promote the enhancement of student autonomy as long as students are actively involved and offered the chance to participate in learning. Thus, even in a more controlled environment, this activity remains a significant contributor to building and strengthening students' learning autonomy.

The Correlation between Language Learning Strategies and Learner Autonomy

The Pearson correlation analysis found that the alternative hypothesis was acceptable, indicating a positive correlation between language learning strategies and graduate students' autonomy. The results obtained are consistent with earlier studies (Daflizar et al., 2022; Irgatoğlu et al., 2022; Samaie et al., 2015). Even though the research was performed in diverse participant contexts, their study uncovered a significant connection between the utilization of LLS and students' autonomy. This provides consistent and supportive evidence that the better the strategy implemented, the higher the learner's autonomy (Daflizar et al., 2022). Involving metacognitive strategies within the learning process can assist students plan the steps necessary to attain learning objectives and understand the best way to master their English learning autonomously. In other words, these strategies not only help learners master the target language more effectively but also encourage

them to develop the skill to handle and manage the process of learning activities autonomously.

By utilizing language learning strategies, students can more easily adapt to the demands of academic literacy, such as reading articles or scientific journals that are often written in English, writing scientific papers with a structure and style that are in accordance with academic standards, and delivering presentations in English well. These activities help them become more autonomous and make it easier to undergo postgraduate studies.

Language learning strategies and learner autonomy have a strong correlation as they can aid graduate students in achieving greater autonomy in learning English and achieving their academic goals. This research reinforces the idea of several previous researchers such as Daflizar et al. (2022) and Irgatoğlu et al. (2022) that mastery of LLS can contribute positively to students' ability to develop autonomy in learning process. Effective LLS can be key in strengthening graduate students' learning autonomy in English. By utilizing the right strategies, students not only enhance their English language abilities but simultaneously provide space for them to be proactive and involved in their studies to become autonomous learners.

CONCLUSION

The findings of this research have produced several conclusions. First, the majority of graduate students at Yogyakarta State University use more metacognitive strategies in learning English. Second, graduate students demonstrate high levels of autonomy, with high abilities in managing learning and choosing activities outside and inside the classroom that support increased autonomy in learning English. Third, there is a positive correlation between language learning strategies and the level of graduate students' autonomy. Effective usage strategies for language learning can improve students' ability to understand and master English. Meanwhile, the high level of learner autonomy assists them in easily controlling the learning process. Therefore, language learning strategies and learner autonomy

are interrelated, as they both contribute to facilitating students gaining greater autonomy in learning English and achieving their academic targets.

This study has limitations because the target population only includes postgraduate students in one batch at one state university in Yogyakarta, Indonesia. Further research interested in studying the same topic can involve more and diverse samples from various postgraduate education institutions to gain more in-depth knowledge about language learning strategies and autonomy in graduate students. In addition, this study was conducted quantitatively because the researcher believes that this approach is most appropriate to answer the research questions. However, the lack of qualitative aspects in this research can be a limitation due to the lack of in-depth explanation or detail. Therefore, it is recommended that qualitative and quantitative methods be combined. By conducting interviews or observations, it is possible to provide more in-depth information about participants' experiences and perceptions of language learning strategies and their autonomy in learning.

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Appendix A: Strategy Inventory for Language Learning (SILL) Questionnaires by Oxford (1990)

The questionnaire was assessed using a 5-point Likert scale distributed as follows:

(1) **Never true of me**
(2) **Usually not true of me**
(3) **Somewhat true of me**
(4) **Usually true of me**
(5) **Always true of me**

NO	ITEM
DOMAIN MEMORY STRATEGIES	
1	I think of relationships between what I already know and new things I learn in English
2	I use new English words in a sentence so I can remember
3	I connect the sound of a new English and an image of the word to help me remember the word
4	I remember a new word by making a mental picture of a situation in which the word might be used
5	I use rhymes to remember new English words
6	I use flashcards to remember new English words
7	I physically act out new English words
8	I review English lessons often
9	I remember new words or phrases by remembering their location on the page, on the board
DOMAINS COGNITIVE STRATEGIES	
10	I say or write new English words several times
11	I try to talk like native English speakers
12	I practice the sounds of English
13	I use the English words I know in different ways.
14	I start conversations in English
15	I watch English language TV shows or go to movies spoken in English
16	I read for pleasure in English
17	I write notes, messages, letters, or reports in English
18	I first skim an English passage (read it quickly) then go back and read carefully.

19	I look for words in my own language that are similar to new words in English.
20	I try to find patterns in English.
21	I find the meaning of an English word by dividing it into parts that I understand
22	I find the meaning of an English word by dividing it into parts that I understand.
23	I make summaries of information that I hear or read in English.
DOMAIN COMPENSATION STRATEGIES	
24	To understand unfamiliar English words, I make guesses.
25	When I can't think of a word during a conversation in English, I use gestures.
26	I make up new words if I do not know the right ones in English
27	I read English without looking up every new word.
28	I try to guess what the other person will say next in English
29	If I can't think of an English word, I use a word or phrase that means the same thing.
DOMAIN METACOGNITIVE STRATEGIES	
30	I try to find as many ways as I can to use my English.
31	I notice my English mistakes and use that information to help me do better.
32	I pay attention when someone is speaking English.
33	I try to find out how to be a better learner of English
34	I plan my schedule so I will have enough time to study English
35	I look for people I can talk to in English
36	I look for opportunities to read as much as possible in English
37	I have clear goals for improving my English skills.
38	I think about my progress in learning English.
DOMAIN AFFECTIVE STRATEGIES	
39	I try to relax whenever I feel afraid of using English.
40	I encourage myself to speak English even when I am afraid of making a mistake
41	I give myself a reward or treat when I do well in English
42	I notice if I am tense or nervous when I am studying or using English
43	I write down my feelings in a language learning diary
44	I talk to someone else about how I feel when I am learning English
DOMAIN SOCIAL STRATEGIES	

45	If I do not understand something in English, I ask the other person to slow down or to say it again
46	I ask English speakers to correct me when I talk.
47	I practice English with other students
48	I ask for help from English speakers
49	I ask questions in English.
50	I try to learn about the culture of English speakers

Appendix B: Learner Autonomy (LA) Questionnaire by Chan and Spratt (2002)

Section 1. Ability

The questionnaire was assessed using a 5-point Likert scale distributed as follows:

(1) **Very poor**
(2) **Poor**
(3) **Ok**
(4) **Good**
(5) **Very Good**

NO	ITEM
1	Choosing learning activities in class
2	Choosing learning activities outside class
3	Choosing learning objectives in class
4	Choosing learning objectives outside class
5	Choosing learning materials in class
6	Choosing learning materials outside class
7	Evaluating your learning
8	Evaluating your course
9	Identifying your weakness in English
10	Deciding what you should learn next in your English lessons?
11	Deciding how long to spend on each activity

Section 2. Activity Outside and Inside the Classroom

The questionnaire was assessed using a 4-point Likert scale distributed as follows:

(1) **Often**
(2) **Somotimes**

(3) Rarely

(4) Never

Outside Classroom

NO	ITEM
12	Read grammar books on your own
13	Done Assigments which are not compulsory
14	Noted down new words and their meanings
15	Written English notices around you
16	Read English notices around you
17	Read newspapers in English
18	Sent e-mails in English
19	Read books or magazine in English
20	Watched English TV programmes
21	Listened to English radio
22	Listened to English songs
23	Talked to foreigners in English
24	Practised using English with friends
25	Done English self-study in a group
26	Done grammar exercises
27	Watched English movie
28	Written a diary in English
29	Used the internet in English
30	Done revision not required by the teacher
31	Attended a self-study centre(e.g. CILL)
32	Collected texts in English (e.g. articles, brochures, labels, etc)
33	Gone to see your teacher about your work

Inside Classroom

NO	ITEM
34	Asked the teacher questions when you don't understand?
35	Noted down new information?
36	Made suggestion to the teacher?
37	Taken opportunities to speak in English?
38	Discussed learning problems with classmate?