Students' strategies in learning writing online: A case at English Education Department

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ARTICLE INFO

ABSTRACT

Writing is an important skill for language development and academic success. To address the need for effective writing strategies, this study aims to describe students' learning strategies for developing writing skills when learning writing online. This research employs a mixed-method approach. Data collection techniques include a questionnaire and interview. The Inventory of Learning Strategies, based on and modified from Oxford (1990), was validated and used for this study. The questionnaire was distributed to the population of 190 sixth-semester students in the English Education Department. The questionnaire data was analyzed descriptively and presented in percentages of each strategy. Additionally, interviews were conducted with 12 students from the same department, and the results were classified according to Oxford's learning strategy classifications. The research findings indicate that students in the English Education Department utilize all learning strategies: metacognitive, memory, cognitive, compensation, affective, and social strategies. Compensation strategies are the most frequently used, while memory strategies are the least applied in learning writing online. These findings help teachers identify suitable methods to support students' writing development.

1. Introduction

In today's rapidly evolving educational landscape, the development of writing skills remains a cornerstone of language learning, especially in English as a foreign language. Writing, along with listening, speaking, and reading, forms one of the four essential language skills necessary for effective communication and academic success. Writing is a natural extension of speech and a process of organizing, expressing, and refining ideas (Nystrand, 2023; Zong & Zhen, 2021; Ahrens, 2022; Dorn & Soffos, 2023). It serves as a means to communicate thoughts, opinions, and emotions through written language, involving the presentation and construction of meaning (Dimbleby & Burton, 2020; Nystrand, 2023). Through writing, ideas, express feelings, and convince others can be shared. In this global era, many aspects of life require writing skills. One example where writing takes on an important role is in educational settings. Students are expected to be able to write for personal and academic writing as well.

Learning writing is challenging. The difficulties that the students face can be related to different aspects of writing such as organization of ideas, vocabulary, grammar, and mechanics (Fauzan et al., 2022; Uba & Souidi, 2020; Khemanuwong et al., 2020). In addition to such linguistic problems, there can be affective, cognitive ones that the students have to deal with (Bulqiyah et al., 2021). The affective problems can be resulted from the students' and lecturers' attitude while teaching and learning writing, whereas the cognitive problems are in the areas of writing viewpoint, transferring language, and the process of writing. Also, unclear writing task descriptions and requirements may hinder task accomplishment (Subandowo & Sárdi, 2023). Researchers also included possible solutions to the problems in learning writing. In coping with the students' difficulties in writing, the students can apply peer feedback (Fatimah & Madya, 2020; Zhu et al., 2024). Support from the university is also part of the solution (Phyo et al., 2024; Subandowo & Sárdi, 2023). As the technology developed, AI-writing assistants are another alternative of solving the problems in writing (Fitria, 2021; Gayed et al., 2022). Indeed, when writing texts, students are required to do several things simultaneously. They must plan, translate, and review, which involves demanding cognitive processes (Li, 2023).

Writing challenges have long been a concern for students, particularly in mastering effective strategies to enhance clarity and coherence. With the rise of online learning, these challenges have evolved, requiring students to adapt their writing strategies in digital environments. Online platforms introduce new modes of interaction, feedback mechanisms, and self-directed learning opportunities, influencing how students plan, draft, and revise their work. Understanding these adaptations is essential to support students in developing effective writing strategies in online settings.

To deal with this, students need to develop their writing strategy. Students have different strategies in deepening their knowledge and skills on writing. Learning strategy is the way individuals organize and use a certain set of skills to learn or accomplish learning goals more effectively and efficiently (Lestari & Wahyudin, 2020). Earlier than that, more definitions were added by O'Malley et al., (1985) in Othman et al. (2022), which described learning strategies as "the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information". They can select the activity based on their preference in order to make learning more enjoyable. Further, learning strategies are specific actions, behaviors, steps, or techniques – such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task – used by students to enhance their own learning (Oxford, 1990, 2002, 2021).

Oxford (1990) categorized language learning strategies into direct and indirect strategies, which help learners acquire, process, and use a new language effectively. Direct strategies involve active engagement with the language and include memory strategies (for storing and retrieving information), cognitive strategies (for understanding and producing language), and compensation strategies (for overcoming gaps in knowledge). These strategies require mental processing of the language itself. In contrast, indirect strategies support language learning more generally and include metacognitive strategies (for planning, monitoring, and evaluating learning), affective strategies (for managing emotions and motivation), and social strategies (for interacting with others to enhance learning).

Considering the current situation, blended, hybrid, or online learning is more common in teaching and learning. Online learning uses the internet network with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions (Dhawan, 2020; Ferri et al., 2020). The use of the internet and multimedia technology is able to change the way knowledge is delivered and can be an alternative to learning carried out in traditional classrooms (Dakhi et al., 2020; Haleem et al., 2022).

While previous studies have extensively examined writing challenges and possible solutions, they have primarily focused on traditional learning contexts, general literacy skills, or digital competencies (Falloon, 2020; Öncül, 2021; Tinmaz et al., 2022). However, research on how students adapt and optimize their writing strategies in online learning environments remains limited. Considering the increasing reliance on digital platforms, understanding how students adapt their learning strategies in online settings is crucial. Therefore, this study addresses this gap by exploring specific strategies used by the students at English Education Department when learning writing online, identifying the most commonly applied strategies to enhance their writing skills.

2. Method

2.1. Research setting and procedures

This descriptive quantitative study was conducted in an English Education Department of a private university in Yogyakarta in 2021. Among 190 sixth-semester students of English Education Department as the population, and referring to Isaac and Michael's table (in Sugiyono, 2013)), the number of the sample size with a level of significance 5% is 123 and the researchers obtained the data from 127 students. In addition, interview was carried out to explore the information about the application of strategies used by the students in learning writing online. The interview involved 12 students to reflect a diverse range of the learning strategies. And with 127 respondents, 12 students represented approximately 9.5% of the total sample, which is a reasonable proportion for qualitative follow-up interviews. It was conducted through Voice Note via WhatsApp and Google Meeting.

2.2. Instrument

The instrument used is a questionnaire. This was the Inventory of Learning Strategies based on Oxford (1990) adopted from Peñuelas (2015). The questionnaire is used to determine the writing learning strategies used by students through online learning. It consists of 47 items; however, the researcher modified several questionnaire items into 54 items, and based on the suggestion of the ELT expert, it was reduced into 40 items to suit the needs of the research objectives to find out which learning strategies are mostly used by the English Education students in learning writing online (Table 1). The instrument consisting of 40 items was tested for validity and reliability (r 0.6724> 0.361; α 0.940). Since r = 0.6724 is higher than the critical value 0.361, it implies that the correlation is strong enough to be considered statistically significant at the given significance level. This means that the instrument is valid. Then, α 0.940 indicates that the questionnaire has very strong internal consistency, making it highly reliable.

Table 1. Blueprint of the Instrument of Online Writing Strategies

Strategies	Item Number
Memory	1, 2, 3, 4, 5, 6
Cognitive	7, 8, 9, 10, 11, 12, 13
Compensation	14, 15, 16, 17, 18, 19
Metacognitive	20, 21, 22, 23, 24, 25, 26, 27, 28
Affective	29, 30, 31, 32, 33, 34
Social	35, 36, 37, 38, 39, 40

The questionnaire items were statements with five-point Likert Scale response ranging from 5 (strongly agree) to 1 (strongly disagree). The instrument also added words related to *"online learning"* such as e-book, online dictionary, writing online and online learning in several items because it is adjusted to the research to be carried out. The process of modifying was carried out by the researchers by adding and reducing some items to suit the objective of the research. The instrument was tried out the questionnaire was distributed via a Google form. The instrument was translated into Indonesian. However, the questionnaire was distributed in two languages, that is English and Indonesian, to make the filling it process easier.

2.3. Data analysis

The questionnaire data, to confirm how the students applied the strategies in learning writing online, were analyzed using Microsoft Excel. The interpretation is as follows: strongly disagree 0%-20%; disagree 21%- 40%; neutral 41%-60%; agree 61%-80%; strongly agree 81%-100%. Positive confirmation is reflected by the students' responses of agree and strongly agree (Joshi et al., 2015; Taherdoost, 2019), on which the researchers based the analysis. The data were tabulated and grouped into direct and indirect strategies. The analysis involved calculating the percentages of each learning strategy employed by the students. This approach provided a clear overview of the prevalence of different strategies. By quantifying these percentages, the study identified which strategies were most and least commonly used. This analysis was crucial in understanding the students' preferred strategies for learning writing in an online setting.

3. Findings and discussion

3.1. Strategies in learning writing online

The findings are presented in different parts to convey different aspects of the research results. Table 2 indicates direct strategies employed by the students in learning writing online. There are three sub-strategies: memory, cognitive and compensation strategies. Among memory strategies, item 1 received the highest agreement (85.03%) with the statement, "I relate my composition topic to my background knowledge". Meanwhile, item 7 got the greatest agreement (85.1%). Its statement is "I reread frequently in an attempt to find out what I want to write". Further, statement 15 on compensation strategies received 90.6% strong agreement, indicating that they use online sources when they don't have enough ideas to complete my composition".

Table 2. Direct Strategies in Writing Online

No	Item	SA	A	N	DA	SDA
	Memory Strategies					
1	I relate my composition topic to my background knowledge	40.94%	44.09%	14.17%	0.79%	0%
2	I use new words in sentences and review new structures that come across regularly so that I can remember them and use them when writing online.	16.54%	51.18%	29.13%	2.36%	0.79%
3	I memorize new English words by writing them down online several times.	23.6%	38.6%	24.4%	10.2%	3.1%
4	I revise my old composition so as not to forget the mistakes I made and how to solve them.	19.7%	40.2%	27.6%	11.8%	0.8%
5	Using words and structure in their meaningful online writing context helps me learn better.	28.3%	50.4%	20.5%	0%	0.8%
6	I jot down the necessary and helpful word expressions on flash cards.	13.4%	25.9%	37%	19.7%	3.9%
	Cognitive Strategies					
7	I reread frequently in an attempt to find out what I want to write.	44.9%	40.2%	12.6%	1.6%	0.8%
8	I review previous sections of the text and move paragraphs when I find a mismatch between my written text and the ideas I want to express in a more coherent way.	35.4%	45.7%	16.5%	1.6%	0.8%
9	I reformulate the linguistic expression (i.e., word, phrase, sentence) when I am not sure it is right.	32.3%	46.6%	18.9%	1.6%	0.8%
10	I write different drafts of my composition.	22%	33%	33%	7.9%	3.9%
11	I read e-books or good writers' compositions to improve my writing.	34.6%	37%	20.5%	4.7%	3.1%
12	I compare my composition with my plan or outline to see how well they match or to consider changes.	31.5%	44.9%	20.5%	2.4%	0.8%
13	I use transition words ("thus", "however", "nevertheless" and so on) in my composition that would help my reader to understand my point.	29.1%	41.7%	22.8%	6.3%	0%
	Compensation Strategies					
14	I use an Indonesian-English online dictionary while writing online to find out words that I don't know how to express in English.	53.5%	31.5%	11.8%	3.2%	0%
15	I use online sources when I don't have enough ideas to complete my composition	56.7%	33.9%	9.4%	0%	0%
16	I make short pauses while writing my composition online to consider what I have written so far.	33%	47.2%	19.7%	0%	0%
17	If I do not know a word in English, I write it in Indonesian and later try to find an appropriate English word.	55.1%	33.9%	7.1%	2.4%	1.6%
18	I use a similar word or close (synonyms) to that word if I do not remember the correct word.	37.8%	44.9%	13.4%	2.4%	1.6%
19	I revise and edit the text before submitting the paper.	45.7%	38.6%	14.2%	1.6%	0%

Further, Table 3 presented the findings on the students' indirect strategies. They consist of metacognitive, affective and social strategies. Among metacognitive strategies, item 24 had the highest agreement (81.9%) with the statement "I write with a specific purpose in mind (i.e., to convince, inform, narrate an event and so on)". Then, among affective strategies, the students share their most agreement (79.6%) on item 31 expressing that they motivate themselves to keep writing by saying "come on", "go on", "you can do it". For social strategies, item 39 "I would like my lecturer to correct the errors in my paper" received the highest agreement (85.1%).

Table 3. Indirect Strategies in Writing Online

No	Item	SA	A	N	DA	SDA
	Metacognitive Strategies					
	Before starting to write online or while writing online					
20	I make decisions about the content, organization of my composition and the linguistic expression (i.e., word, phrase, sentences) and how I should do about them.	26.8%	48%	22%	0.8%	2.4%
21	I go back to my plan to consider the ideas I have written down and to reformulate them if I feel they are flawed.	23.6%	55.1%	19.7%	0.8%	0.8%
22	I frequently think of my audience so as to adjust my text to their needs.	25.9%	44.9%	22.8%	4.7%	1.6%
23	I pay attention to aspects such as thesis statements, topics and supporting sentences.	30.7%	50.4%	16.5%	2.4%	0%
24	I write with a specific purpose in mind (i.e., to convince, inform, narrate an event and so on).	31.5%	50.4%	16.5%	1.6%	0%
25	I am concerned with my lack of online writing fluency and do something about it.	28.3%	50.4%	17.3%	1.6%	2.4%
26	I have a set of priorities when revising my composition: first, ideas and organization and then grammar and spelling concerns.	29.9%	47.2%	20.5%	2.4%	0%
27	I know the characteristics of good essays.	18.1%	35.6%	33.9%	7.9%	1.6%
28	I am aware of the effectiveness of the strategies that I employ for my writing.	17.3%	40.9%	36.2%	3.9%	1.6%
	Affective Strategies					
29	I encourage myself to find a better solution to a linguistic problem in my composition.	35.4%	35.4%	27.6%	1.6%	0%
30	I reward myself when I'm given a good grade in a composition.	35.4%	40.2%	18.9%	2.4%	3.1%
31	I motivate myself to keep writing by saying "come on", "go on", "you can do it".	45.7%	33.9%	12.6%	6.3%	1.6%
32	I try to overcome feelings of frustration, sadness, etc. when my online writing is not as good as I would like to.	29.9%	44.9%	22.8%	2.4%	0%
33	Before writing online, the writing environment must be quiet.	44.9%	28.3%	25.6%	1.6%	1.6%
34	I talk to my friends about how I feel or how they feel when online writing in English.	26.8%	38.6%	25.2%	7.1%	2.4%
	Social Strategies					
35	I seek assistance when I have linguistic problems that I cannot solve or I ask another person to revise my composition.	37%	34.6%	19.7%	3.9%	4.7%
36	I seek opportunities to improve my online writing, such as writing frequently for other people (emails, chat, letters, and others).	26.8%	30.7%	30.7%	6.3%	5.5%
37	I give my online writing to a friend or someone who is good at writing so that I have an opinion about my writing.	25.2%	33.1%	28.3%	8.7%	4.8%
38	I compare my composition with my classmates' compositions.	24.4%	36.2%	22%	10.2%	7.1%
39	I would like my lecturer to correct the errors in my paper.	57.5%	27.6%	11.8%	2.4%	0.8%
40	I check my mistakes after I get back the paper with feedback from the lecturer and try to learn from them.	48.8%	37.8%	11.8%	0.8%	0.8%

The percentage of learning strategies used by students in online writing learning can be seen in Table 4. It can be found out that for direct strategies, the students mostly used compensation strategies (85,27%). This was followed by cognitive strategies (74.13%) and memory strategies (65.49%). Meanwhile for the indirect strategies, it did not show that most students prefer to use certain sub-strategies referring that each of the indirect strategies were confirmed by less than 80% (metacognitive strategies (73.03%); affective strategies (72.97%); social strategies (67.92%).

Table 4. Learning Strategies in Online Writing

No	Strategies		SA	A	N	DA	SDA
1.	Direct Strategies	Memory strategies	23.75%	41.74%	25.47%	7.48%	1.57%
		Cognitive strategies	32.82%	41.31%	20.69%	3.73%	1.46%
		Compensation strategies	46.95%	38.32%	12.60%	1.60%	0.53%
2.	Indirect Strategies	Metacognitive strategies	25.88%	47.15%	22.90%	2.91%	1.16%
		Affective strategies	36.22%	36.75%	22.04%	3.55%	1.44%
		Social strategies	35.23%	32.07%	19.93%	8.98%	3.80%

After provided with the findings on the learning strategies and sub-strategies in Table 4, Table 5 was presented to show that all sub-strategies are applied by the students in learning writing online. However, compared to the six sub-strategies, the strategies mostly used by the students are compensation strategies (19.46%). This can be related to the idea that in applying the compensation strategies, the students can use the language they learn for either comprehension or production despite their limitation in language. They can use linguistic or other clues, switch to mother language, using mime or gesture, etc.

Table 5. Learning Sub-Strategies on Online Writing

No.	Strategies	Percentage
1	Memory	14.95%
2	Cognitive	16.92%
3	**Compensation**	**19.46%**
4	Metacognitive	16.67%
5	Affective	16.65%
6	Social	15.36%

The compensation strategy is the most widely used strategy by sixth semester students in the English Education Department in learning writing online. This strategy was used by 19.46% of students. This compensation strategy consists of several aspects, such as using intelligently and overcoming limitations in speaking and writing. According to Oxford (1990), compensation strategies are usually used to overcome language limitations. This statement is in accordance with the findings of this study. It can be seen that in learning to write online, students overcome limitations in writing by switching to the language they master, for example Indonesian, getting help by looking for references from various sources to choose topics and contents of a writing, in addition to using other clues and using similar words or synonym. This strategy can help students overcome their language limitations.

The second most used strategy is cognitive (16.92%). This strategy consists of four aspects, namely practicing, receiving and sending messages, analyzing and reasoning, and creating a structure for input and output. Oxford (1990) argues that cognitive strategy is a student's behaviour in the learning process related to the use of thinking power. It can be seen based on the questionnaire, that during writing learning in the online class students repeat the writing review and reread frequently, combining sentences using transition words. Besides, they also use resources for sending massage, such as an e-book or a good writer and also take notes and make summaries. These can make it easier for students in the writing process.

Metacognitive strategy is the third most widely used strategy by students in online writing learning (16.67%). Metacognitive strategies include three strategy sets that are centering your learning, arranging and planning your learning, and evaluating your learning. According to Oxford (1990),

learner behaviour is related to the technique the learner deals with and manages teaching and learning materials. Therefore, one of the strategies used is to conduct self-evaluation by considering the ideas that I have written and reformulating them if they are flawed. In addition, paying attention to aspects such as thesis statements, topics, and supporting sentences and writing with a specific purpose e.g., to convince, inform, narrate an event, and so on. And also paying attention to writing aspects such as thesis statements, topics, and supporting sentences. In addition, finding out about language learning is like knowing the characteristics of a good essay. Therefore, learners can learn independently by concentrating on their learning, compiling and planning their learning activities, and evaluating their learning progress.

Next is affective strategy, Oxford (1990) explains that learner behaviour is related to attitudes and feelings in dealing with the learning process. In this strategy there are three aspects of activity, that is reducing anxiety, encouraging yourself, and measuring emotional temperature. The students apply this strategy is 16.65%. It can be seen that during learning writing online, students are encouraging themselves, making positive statements such as "come on", "go on", "you can do it" and so on, rewarding themselves, pay attention to the given signal by the body, and talking with another person to express the feelings. Therefore, this strategy will make it easier to find out how to control their emotions and attitudes about learning.

Furthermore, the fifth most widely used strategy is social, Oxford (1990) point outs that learner behaviour related to the collaboration of learners with their peers to achieve learning goals. There are three aspects to this strategy, namely asking questions, cooperating with others, and empathizing with others. From this research, students use this strategy is 15.36%. It can be seen that during learning writing online, students ask correction for example, ask the lecturer for help to correct errors in the paper and give their writing to a friend or someone who is good at writing so that they have an opinion about the writing (Fatimah & Madya, 2020; Zhu et al., 2024). Therefore, this strategy helps students in developing sociolinguistic competencies, such as asking questions and collaborating with other learners.

The sixth or the last ranked are memory strategies (14.95%). As indicated by Oxford (1990), this strategy is used by learners by utilizing previous knowledge and learning experiences. This learning strategy involves a lot of memory and learning processes that use memory. In this strategy there are three aspects of activity, that is creating mental linkages, applying images and sounds, reviewing well, and employing. It can be seen that students place new words or expressions that have been heard or read into a meaningful context, such as a written sentence. And also, a review of new structures that come across regularly and revise the old composition so that they can remember and use it. In addition, using mechanical techniques such as noting the necessary and helpful word expressions on flashcards can help to remember what has been heard or read. Thus, this strategy can help students to connect verbal and visual material so that the brain can retain information longer and then can help students to remember information and can use it when needed.

3.2. How do they apply the strategies in learning writing online?

The students do such strategies as translating Indonesian reading into English, writing articles or journals, and remembering new or important vocabulary written in a notebook. Furthermore, read English online newspapers such as CNN, Jakarta Post, etc., read English subtitles from foreign artists, follow English news accounts to observe the sentence structure, and note down new vocabulary, and also read the comments column as well as commenting. They look for references through the internet such as in e-books and Google Scholar that are close to the topic they want to write and use the application Grammarly, thesaurus, or dictionary.com to deepen vocabulary. On the other hand, they make pauses when writing, especially when revising useful for refreshing their mind. They read the material before class and read the words that are difficult or not understood, then write again the translation of the meaning of the difficult words in the book. Moreover, they make a list of ideas or writing concepts to be written, drafting and writing important points to be conveyed then mapping. And the last is discussion activities during the writing process, for example, discussions about ideas, proper grammar, and vocabulary. Some of the application of these strategies are useful for learning writing online and making it easier for students to learn.

"Some materials are given in readings in Indonesian and then translated into English, students write an essay, and remember new or important vocabulary written in a notebook. In this activity, I can increase my knowledge and experience. When translating, I find a new word, so I immediately

know its meaning. And when making essays, I train my imagination and think about what words I want to write, so many words or sentences that I don't understand the meaning." (#Students 1) --- memory, cognitive

"I often take new vocabulary to use it to write later, I note down the vocabulary, to learn while memorizing. Besides, I also like to read English online newspapers such as CNN, Jakarta Post, etc., read English subtitles about foreign artists, follow English news accounts. From there, I observe the sentence structure, and acquire new vocabulary. Even though I don't understand many, this helps me to be more familiar with written English. I also like watching native speaker vlogs on YouTube, I read the comments while also give comment, even though the grammar isn't correct, but I just want to comment in English to learn." (#Students 2) –memory, cognitive

"I look for references through the internet such as in e-books and Google Scholar. More and more, I often use Grammarly, thesaurus, or dictionary.com to deepen vocabulary in the writing process. I can use them as examples of correct sentences, and checking the thesaurus is fun to do, besides, this gives new experiences, new vocabulary to remember. Because of staying at home, I like to write, especially poetry. There are also some essay writing assignments. Previously, I made an outline and looked for references in e-books and the internet. So, the activity is a lot of reading, especially opening the three applications earlier. For example, when I write and don't know the meaning of a sentence in English, I go to thesaurus, Grammarly, dictionary.com to remember new vocabulary while writing it down in my notes, besides the many benefits, they can also be used as a reference for the next writing." (#Students 3) -- compensation

"In academic writings, such as papers, articles, and essays, activities after drafting are completing or the process of elaboration of the main ideas. Because in my opinion the process before drafting is more difficult because it must determine the direction and purpose of the writing. After drafting, all I have to do is continuing the ideas that have been compiled. In addition, I often reread the writings that have been made. If I re-read, it is very useful because it is to find out whether the writing that has been made is in line with the purpose of making it." (#Students 4)--cognitive

"I look for references that are the same or close to the topic I want to write, make pauses when writing, especially when revising. Because it's hard to focus, making pauses is useful for refreshing my brain and so I can enjoy writing more. Helping to stimulate the idea of "ahh I want to write like this", besides, it is also to enrich the ideas of the writing that will be made." (#Students 5)— compensation, affective

"Read the material before class and then read the words that are difficult or not understood, find the meaning in the dictionary or google translate. Then write again the translation of the meaning of the difficult words in the book........ it was also useful because it made me more enthusiastic about learning, because this increases my new vocabulary. Besides, I also like the process of making drafts. Because I like to do things conceptually. So, if I understand the concept, the writing process will run more smoothly." (#Students 6)—metacognitive, compensation

"Make a list of ideas or writing concepts to be written. I like to revise because there are often new ideas that come up, so an additional word is added to make it complete." (#Students 7)-memory

"Drafting writing and writing important points to be conveyed then mapping. These activities facilitate the writing process and remember the ideas that will be conveyed." (#Students 8)- compensation

"Make a journal in stages, starting with the introduction and then being given feedback by the lecturer until it becomes a complete journal. Because if it is done in stages, starting with the introduction, it will make it easier for us in the writing process and so we understand where we went wrong." (#Students 11)--social

"Discussion activities with friends during the writing process, for example, discussions about ideas, proper grammar, and vocabulary. Mutual correction of each other's writings is also one of the many activities carried out. Because it becomes easier to understand learning writing." (#Students 12).—social

3.3. Discussion

Based on the data in the findings, it can be seen that the most widely used strategy by sixth semester students in the English Education Department is a compensation strategy of 19.46%. Meanwhile, the least used strategy is the memory strategy, with a percentage of 14.95%. In line with the research of Peñuelas (2015), compensation strategies have been found to be useful to make up for the lack of linguistic knowledge and to keep composing going. Of these, compensation strategies are widely used to compensate for the lack of linguistic knowledge, which includes the use of new grammatical structures (Fauzan et al., 2022; Khemanuwong et al., 2020; Uba & Souidi, 2020); revising extensively; reducing information; exercise; rereading for retrospective or prospective functions, the former as a way to assess that the words selected capture the author's intended meaning and the latter to compare their writing with the task of topics and ideas that the author plans to develop; Translate; switch to L1 (first language or mother language); generate and evaluate lexical alternatives; feelings for language through sound and taste; use their L2 (second language or native language) knowledge; guess; replace lexical items; creating words; refers to dictionaries and backtranslation.

In addition, Hidayat and Ariani (2021) research findings also get the same findings as this study. Their research found that the compensation strategy was the most widely used learning strategy by high achieving students in learning English. Based on the result in the research of Ardila (2020), the compensation strategy was the most frequently used. Students who are proficient and less proficient use compensation strategies as the dominant strategy for both male and female students. This is in line with the findings of this study.

Based on the problems found in this study, students employ various strategies to enhance their online writing skills. These include reading English subtitles from foreign artists, following English news accounts to observe the sentence structure, noting down new vocabulary, and engaging with comments sections. Additionally, they use tools like Grammarly (Fitria, 2021), thesaurus, or dictionary.com to expand their vocabulary activity aligned with Oxford's (1990) memory strategies, which involve placing new words in context. Students also read English online newspapers (e.g., Jakarta Post and CNN) to analyze sentence structures and tenses, take notes on essential vocabulary and draft key points – practices that reflect cognitive strategies such as imitation native users, practicing writings systems, and note taking.

In addition, self-evaluation plays a role, as students compare their writing with professional sources and watch educational videos on platforms like YouTube or Tiktok for motivation (Hanim, 2021; Zulkifli et al., 2022). This is in line with metacognitive strategies, especially goal setting and self-assessment. To manage emotions, students engage in relaxing activities like listening to music, using social media, or talking to friends, which corresponds to affective strategies, such as anxiety reduction through music. Finally, peer discussions about ideas, proper grammar, and vocabulary exemplify social strategies, which emphasize collaboration in learning (Oxford, 1990).

Most students agree to apply compensation strategies in online writing because of several reasons. First, these strategies can help them overcome gaps in their language proficiency, especially in vocabulary and grammar. Second, compensation strategies support in adjusting them to the online writing learning which often requires quick responses, such as discussion, chat-based assignment. These lead the students to use applications to check spelling and grammar developing their self-reliant strategies while expecting immediate teacher feedback. Some of them also do translation online to find the right words more efficiently. Through the online learning resources, they can find existing writing work with similar topics as examples to inspire them in writing. The flexibility and accessibility of online resources reinforce the frequent use of compensation strategies, allowing the students to develop writing skills despite their linguistic limitations.

On the contrary, the least used strategies are memory strategies. Oxford's memory strategies provide a structured approach to actively recall and retain new information, in the context of language learning, by creating associations, visual imagery, and other mnemonic devices to enhance memory retention. The students find online writing learning resources help them much so that they do not feel demanded to deal with their memory retention. This finding is reasonable considering that the students can easily look up words, grammar, rules, examples, references instead of relying on their memorization. Application like Grammarly, computer assisted translation tools, AI based writing assistants reduce the need for recalling stored information.

4. Conclusion

The study highlights the diverse range of learning strategies employed by students in the English Education Department for developing their writing skills in an online learning environment. The findings underscore the prominence of compensation strategies, followed by metacognitive, affective, social, and memory strategies. This comprehensive understanding of students' strategic preferences offers valuable insights for educators, enabling them to tailor their teaching methods to better align with the strategies most frequently utilized by students. By accommodating these strategies, educators can enhance the effectiveness and ease of online writing instruction, ultimately supporting students' language development more effectively. This research contributes to the field by providing a detailed analysis of strategy use in online writing contexts, paving the way for further studies to explore targeted interventions and optimized teaching practices.

Declarations

Author contribution	:	**Author 1**: initiated the research ideas, instrument construction, data collection, analysis, and draft writing; **Author 2**: worked on the analysis, reviewing, writing, revising, and editing. **Author 3**: Proofread the final draft.
Funding statement	:	The research is funded under Research Project No. PDP-170/SP3/LPPM-UAD/VI/2021
Conflict of interest	:	The authors declare no conflict of interest.
Ethics Declaration	:	We, as authors, affirm that this research adheres to the ethical regulations of our university. We obtained necessary permissions from relevant institutes during the data collection process. We support the principles of academic integrity and honesty as upheld by the Teaching English as a Foreign Language Journal (TEFLJ) and maintain high standards of personal conduct in our professional practices.
Additional information	:	No additional information is available for this paper.

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