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LANGUAGE ACQUISITION STRATEGY INVENTORY FOR AUTONOMOUS LEARNERS: DISPLAYING STUDENTS' ACADEMIC WRITING SKILLS THROUGH BLENDED LEARNING

[INVENTARIS STRATEGI PEMBELAJARAN BAHASA UNTUK PEMBELAJAR MANDIRI: MENUNJUKKAN KEMAMPUAN MENULIS AKADEMIK SISWA MELALUI PEMBELAJARAN BLENDED]

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Abstract

The pedagogical implementation of blended learning, which advances students' autonomous learning and mastery, shapes academic writing performance in higher education. Nevertheless, more study is needed to examine how autonomous learning and language acquisition strategies affect college students' academic writing products in blended learning settings. The current study examines the academic writing performance of students in language learning and autonomous learning strategies they employed through blended learning. This is a mixed-method research design which twenty-seven students in higher education participated in this study. They were evaluated using questionnaires on

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autonomous learning and strategy inventory language learning and writing tests. The study found that the academic writing scores of the participants ranged from 50.5 to 96, which was indicative of low autonomy. A range of 51 to 94.5 scores suggests that learners are highly autonomous. In addition, 39.51% of participants preferred memory strategies, 14.81% preferred compensatory strategies, and 2.47% preferred cognitive strategies. In the study, 11.11% of participants implemented affective strategies, 4.94% employed social strategies, and 27.16% employed metacognitive strategies. Moreover, the study found the preferred strategies employed by participants to develop their academic writing skills through varying engagement and retention strategies related to language knowledge, which, in turn, influence their academic writing performance. It is essential to take these preferences into account when creating a language learning strategy inventory for English academic writing courses in higher education, as this will foster autonomous learning. Additionally, the development of engaging blended learning activities is expected to enhance students' academic writing skills.

Keywords: academic writing skills; autonomous learner; blended learning; strategy inventory language learning

Abstrak

Implementasi pedagogis pembelajaran campuran, yang mendorong pembelajaran mandiri dan kemampuan mahasiswa, memengaruhi kinerja penulisan akademik di perguruan tinggi. Namun, diperlukan penelitian lebih lanjut untuk mengkaji bagaimana pembelajaran mandiri dan strategi akuisisi bahasa memengaruhi produk penulisan akademik mahasiswa dalam lingkungan pembelajaran campuran. Penelitian ini mengkaji kinerja

penulisan akademik mahasiswa dalam pembelajaran bahasa dan strategi pembelajaran mandiri yang mereka terapkan melalui pembelajaran campuran. Metode penelitian campuran dilakukan dengan melibatkan 27 mahasiswa dengan menggunakan kuesioner tentang pembelajaran mandiri, inventaris strategi pembelajaran bahasa, dan tes menulis. Temuan penelitian menunjukkan bahwa peserta umumnya menunjukkan tingkat otonomi belajar yang rendah dalam proses penulisan artikel akademik mereka. Selain itu, ditemukan preferensi yang bervariasi terhadap strategi pembelajaran bahasa, dengan kecenderungan yang jelas terhadap penggunaan strategi berbasis memori dibandingkan dengan strategi kognitif, sosial, atau afektif. Pola ini menunjukkan bahwa peserta lebih mengandalkan strategi yang melibatkan retensi informasi daripada strategi yang mendorong interaksi, refleksi, atau regulasi emosional dalam proses penulisan. Selain itu, penelitian ini menemukan strategi yang disukai oleh peserta dalam mengembangkan keterampilan menulis akademik mereka melalui berbagai strategi keterlibatan dan retensi yang berkaitan dengan pengetahuan bahasa, yang pada gilirannya mempengaruhi kinerja menulis akademik mereka. Penting untuk mempertimbangkan preferensi belajar mahasiswa saat mengembangkan rencana pembelajaran menulis akademik bahasa Inggris di perguruan tinggi, karena hal ini akan mendorong pembelajaran mandiri. Selain itu, pengembangan aktivitas pembelajaran campuran yang menarik diharapkan dapat meningkatkan keterampilan menulis akademik mahasiswa.

Kata Kunci: keterampilan menulis akademik; pembelajar mandiri; pembelajaran campuran; inventaris strategi pembelajaran bahasa

Introduction

A growing consensus exists that a return to normalcy is preferable to any development during the remote teaching milieu, prompting a reevaluation of educational beliefs. In the aftermath of the remote teaching milieu, educational implementation remains focused on ensuring students' mastery of competencies while accommodating their autonomous learning requirements (Jiang, 2020; Rapanta et al., 2021; Yujing, 2021). Afterward, blended learning was implemented and garnered substantial attention due to the integration of technology into face-to-face instruction. It is an option to be considered for implementation, as it is perceived to be the most effective mode of instruction by higher educational institutions, as it combines technology-mediated instruction with face-to-face instruction. This combination is known to provide continuous, flexible, and timely learning (Rasheed et al., 2020). Moreover, learning occurs during face-to-face sessions at designated times and extends to online environments, allowing students to engage at their convenience, irrespective of location or time. Nonetheless, some in higher education saw it as a threat to the established order. It aims to challenge the entrenched customs of the conventional pedagogical methods employed by numerous physical institutions that have, until now, relied exclusively on student tuition in a face-to-face setting (Bouilheres et al., 2020; GOCTU, 2017). It is essential to establish a link between students' expectations and the learning strategies they select.

In addition, this topic is addressed in an academic writing course specifically structured to enhance the written English skills of collegiate learners. Notwithstanding this, the substantial disparity in students' writing aptitudes and levels of motivation in the context of higher education continues to pose a barrier to effective writing instruction. Furthermore, it is difficult to ensure that students with the lowest motivation and self-regulated learning levels complete the mandatory coursework.

Academic Writing

Academic achievement is contingent upon students' writing skills and talent in higher education institutions (HEI). Academic writing necessitates learning a fresh set of regulations and the ability to adhere to them, which often differ across disciplines (Paltridge, 2004). The target audience and intended purpose of a piece of writing differ based on its context. However, non-native students' writing difficulties are further compounded by the discrepancy between the difficulty level and the expected standards in their countries of origin.

Academic writing consists of various forms, such as research projects, reports, essays, and reflective works. Students are expected to conform to a prescribed set of conventions regarding the structure, substance, and genres of their writing. This can challenge specific individuals (Gopee & Deane, 2013; Xie & Lei, 2022). Moreover, students are expected to exhibit descriptive, analytical, persuasive, and critical reasoning abilities as a mandatory skill. In order to develop their writing abilities, students should obtain skills in self-reflection, vocabulary, and grammar (Teng & Wang, 2022). In addition to constructing an accurate representation of reality, the writer must negotiate with the reader their perspective on these writing elements through the text's construction (Matsuda & Silva, 2020). At this juncture, writing necessitates a multifaceted skill that encompasses both writing components and the writers' persistence, as it involves their metacognitive awareness and self-regulation.

In addition, the primary objective of academic writing courses in higher education is to equip students with the necessary skills and knowledge to compose proficiently within their chosen academic field and their discipline (Hyland, 2013). To fulfill this objective, an academically oriented instructional component of English was developed to impart study skills to students (Bakry, 2021). Students also prefer constructing and reconstructing their academic identities through writing and engaging in academic phenomena to increase their knowledge in this field (Esfandiari et al., 2022). Writing, nevertheless, necessitates a nonlinear progression that extends beyond mere cognition, strategy, and composition. It is generally recursive. Students often engage in a process of pausing, reviewing, and revising their written work prior to proceeding to the subsequent section.

Consequently, it is imperative that writing be evaluated at each developmental stage. The stages of the nonlinear writing process paradigm include pre-writing (planning), drafting, receiving feedback, and revising or rewriting. Through writing, students can explore, clarify, and generate new concepts. The two key constraints of the writing process are intervention and awareness(Alias et al., 2012), which are exemplified by the student's constant access to constructive feedback from a teacher or peers and their awareness of the writing process.

Even though writing requires a systematic approach, classroom instruction time is limited. Students compose with differing degrees of fluency and velocities for academic purposes, complicating the management of writing courses. Furthermore, academic writing adheres to a process-oriented methodology (Bastalich, 2011). Students who finish their assignments ahead of their delayed peers may be required to wait. On the contrary, students who are more purposeful or lack motivation risk becoming irretrievably behind and ultimately abandoning the course. Delegating learning to students autonomously, contingent upon their personal interests, goals, and level of proficiency, is an extraordinarily efficacious approach.

Blended Learning

The post-remote teaching milieu has resulted in the growing popularity of blended learning in the learning process (BRENYA, 2022; Yu et al., 2023). It has garnered substantial attention and has been widely acknowledged as an innovative concept that seamlessly incorporates the advantages of conventional classroom instruction with ICT-supported learning through both online and offline opportunities. Furthermore, it seamlessly incorporates online and in-person learning, which may involve integrating computer-mediated instruction with face-to-face instruction or integrating classroom face-to-face learning experiences with online learning experiences (Hrastinski, 2019; Lalima & Lata Dangwal, 2017). The consensus is that blended learning relies on face-to-face and online learning as its fundamental components, with the potential for constructive and collaborative learning through computer-assisted learning.

The successful implementation of integrated learning necessitates rigorous efforts, a substantial budget, a positive attitude, and highly motivated teachers and students (Luo & Zhou, 2024; Masadeh, 2021). In addition, incorporating technology into face-to-face learning enhances the efficacy of providing continuous, flexible, and timely learning (Qamar et al., 2024). The primary participants in teaching-learning activities are students. Consequently, it is essential to ascertain their preparedness and perceptions for effective pedagogical implementation consistent with their backgrounds, abilities, characteristics, and learning preferences, particularly in a blended learning context, as specific learners may find it difficult to adjust to the new design and tools (Boelens et al., 2018; Kintu et al., 2017). At present, integrated learning is the most widely used and effective instructional method in educational institutions.

Learner Autonomy

The degree to which students are accountable for their education demonstrates learner autonomy (LA). It is an educational approach wherein the student is either fully equipped or has already begun to assume accountability for his learning (Dickinson, 1993). Additionally, the capacity for detachment, critical reflection, independent action, and decision-making can be interpreted as LA. Learner autonomy in the L2 classroom as being characterized by pedagogical principles, including learner engagement, reflection, and the appropriate use of target language (Little, 1991). Furthermore, autonomous learners possess knowledge of the teacher's objectives as they can discern the teacher's actions and comprehend the goals and purpose behind their work.

Students can formulate their learning objectives in conjunction with the teachers. Furthermore, they exemplify the values of students who can discern ineffectual learning strategies and subsequently employ them. They possess an extensive repertoire of strategies and are willing to relinquish those that could be replaced with more effective alternatives. Furthermore, by actively monitoring their learning, students can perform self-evaluation (Dickinson, 1993).

Autonomous learners are formed through the emotional involvement, intrinsic motivation, and encouragement and stimulation

that arise from their ability to shape their consciousness (Roth et al., 2019). They understand that they have the authority to determine and direct their learning activities (Benita, 2020). It also necessitates their capacity to forecast the level of active engagement that students should exhibit in academic pursuits and the cognitive processes they should engage in.

The student's self-awareness regarding language learning strategies that influence their preferred learning approach is occasionally linked to their learning commitments, policies, and multicultural upbringing (Oxford, 2018). In addition to enhancing students' motivation, requirements, and enjoyment, language-learning strategies can also improve their enjoyment of learning English. To achieve their learning objectives, foreign language learners employ English learning strategies, including specific English activities, learning skills, student behaviors, in-class and out-of-class learning, and procedures (Zou & Lertlit, 2022). Strategies that students employ to acquire English as a foreign language are considered to be maps or facilitators of language acquisition.

Both students and teachers can utilize the strategy inventory for language learning (SILL) to assess the application of particular language learning strategies by learners of a foreign language. As shown in Table 1, it was structured according to strategy categories, which comprised Memory, Cognitive, Compensation, Metacognitive, Affective, and Social (Oxford & Burry-Stock, 1995).

Table 1. Strategy inventory for language learning

Strategy	Descriptions
a. Memory strategies	Grouping, imaginary, rhyming, structured
b. Cognitive strategies	Reasoning, analyzing, summarizing (all reflective of deep processing), general practicing
c. Compensation strategies	To compensate for limited knowledge, such as guessing meanings from context in reading and listening, using synonyms and gestures to convey a meaning when

		the target language is not known (to compensate for limited knowledge)
d.	Metacognitive strategies	Paying attention, seeking consciously for practice opportunities, planning for language tasks, self-evaluating progress, and monitoring error
e.	Affective strategies	Emotional, motivational strategies, anxiety reduction, self-encouragement, self-reward
f.	Social strategies	Asking questions, cooperating with native speakers of the language, and becoming culturally aware.

Understanding learning strategies has enormous potential in a blended learning situation, as it can illuminate the variations among college students. In order to facilitate their learning processes, they utilize a variety of learning strategies. Proficient language learners generally utilize an extensive array of strategies (Pawlak, 2021; Seng et al., 2023), given that understanding these strategies has unveiled their essential ramifications. Developing these strategies is optional throughout the learning process. Therefore, further study on students' learning practices in higher education should be done in order to foster autonomy in a blended learning setting.

The success of students' writing can be attributed, in part, to the implementation of language learning strategies (LLS) (Nejad et al., 2022). Students contribute to a more enjoyable and flexible writing process through their behaviors. Students are assisted in achieving their goals of increased proficiency, learner autonomy, and self-regulation with the aid of the appropriate LLS (Mu, 2005). The students employed second language learning strategies, which are dynamic and complex thoughts and actions, to regulate cognitive, emotional, and social aspects of themselves in a specific context. These strategies served multiple purposes, including (a) task completion, (b) language performance or use improvement, and (c) long-term proficiency enhancement (Oxford, 1990, 2016, 2018).

Autonomy learning and language learning strategies in the context of blended learning have been the subject of abundant research (Tsai, 2021; N. Wang et al., 2021; X. Wang & Zhang, 2022; Wong et al., 2020). Nevertheless, further research is still needed into how EFL writing students cultivate their autonomy via language learning strategies through blended learning. Consequently, the objective of this study was to ascertain the language learning and autonomous learning strategies that students employed to enhance their academic writing performance in the wake of remote learning milieu. The following research questions led the present investigation:

1. How does the student learning autonomy category align with their academic writing performance scores in blended learning?
2. In blended learning in a post-remote teaching environment, which language learning strategy do students employ to optimize their academic writing performance for essay development?

Research Method

This study employed a qualitative design, including twenty-seven participants, of whom 81.5% self-identified as female and the remaining as male. Quantitative methods were employed to investigate the relationships between variables and identify patterns in students' academic writing performance through descriptive statistics and inferential analysis. In addition, the data in Table 2 suggest that only 11.1% of students expressed dissatisfaction with their academic writing in English.

Table 2. Demographic data

Gender	
Male	18.5%
Female	81.5%
How students assess their English academic writing skills	
Not good	11.1%
Good	77.8%
Very good	11.1%

Instruments and Procedures

The study utilized the Autonomous Learning (AL) instruments (Dickinson, 1993) and Strategy Inventory Language Learning (SILL) (Oxford, 2018; Oxford & Burry-Stock, 1995) respectively. The AL questionnaire was developed to classify students as high or low-autonomy learners based on their self-reported behaviors and attitudes toward learning. Additionally, the SILL questionnaire was modified to assess the extent to which students employ various learning strategies (memory, cognitive, compensatory, metacognitive, affective, and social). The frequency of students' use of these strategies will be evaluated on a Likert scale in this survey. In addition to closed-ended statements, the questionnaire allowed researchers to submit open-ended queries, which were then qualitatively analyzed.

The validity criteria were met by 53 of the 67 items of the AL instrument, which were validated using a sample of 31 participants. The AL instrument was found to have a reliability of 0.959. During the validation procedure, which involved 29 participants, the SILL instrument achieved a reliability rating of 0.925 for 31 out of 48 items. The classification analysis of the AL and SILL instruments was conducted exclusively with legitimate items. The AL levels of the study participants (N=27) were categorized into two distinct categories: low AL and high AL. The mean aggregate score determined the classification. The 53 assessment items analyzed in the discipline of AL yielded an average overall score of 187.613. Participants with achievement scores that exceeded the mean total score were allocated high AL, while those with scores that were below the mean total score were assigned low AL.

In a blended learning environment, students were also required to complete a standardized academic writing examination by composing an essay. A rubric was employed to evaluate the students' essays in accordance with the writing components.

Data Analysis Procedures

Research data from the participants was gathered using 31 SILL items. Social, memory, cognitive, compensatory, metacognitive, affective, and affective strategies comprised the subsequent groupings of the participants. The selection process for this classification relied on determining which participant utilized the most apparent strategy. An analysis of the mean scores of the questionnaire responses about memory, cognition, compensation, metacognition, affect, and social strategies was conducted in order to ascertain the principal approach utilized by the participants. Their most prevalent strategy was determined to be the one with the highest significant average score.

The results of the AL data analysis indicated that a group of fourteen participants demonstrated considerable degrees of autonomous learning. On the contrary, the thirteen remaining participants were categorized as low-autonomous learners. Furthermore, the assessment of academic writing performance encompassed analyzing the following elements: structure, grammar, sentence structure, content, writing mechanism, and format (Oshima & Hague, 2006).

Research Findings

The Student Learning Autonomy Category Corresponds to Their Academic Writing Performance Scores in a Blended Learning Situation

The findings derived from the analysis of the AL data revealed that a group comprising fourteen participants exhibited significant levels of autonomous learning. Conversely, the thirteen remaining participants were classified as learners with low autonomy. Table 3 displays the AL categories and their respective Academic Writing Performance (AWP) scores.

Table 3. Autonomous learning students and AWP scores in a blended learning situation

Participants	Autonomous Learning	AWP Score
AAD	High	81
APW	Low	87.5
AZA	High	78.5
CDPE	Low	88
DDS	High	51
DNT	High	90.5
ER	Low	89.5
FNR	High	94.5
FMZ	Low	91.5
FN	High	94
FAS	High	79
GYA	Low	65.5
GNA	Low	50.5
INT	High	79.5
IRM	Low	51
KML	Low	67.5
LT	Low	94.5
MAM	High	55
MRF	Low	96
MNG	High	87.5
SPR	High	81.5
RAR	High	89
SZ	High	75
SO	Low	89.5
SP	High	93
SS	Low	80
USD	Low	85

The participants' academic writing performance (AWP) scores were classified as having a low AL range from 50.5 to 96, as shown in Table 3. In contrast, the range of scores for the high AL category is from 51 to 94.5.

The Application of Students' Language Learning Strategy to Achieve Their Academic Writing Performance in a Blended Learning Situation

The analysis of the SILL data, as shown in Table 4, yielded the following findings: 14.81% of the participants were found to employ a memory strategy, and 14.81% were found to employ a compensative strategy. In comparison, 25.93% employed cognitive strategy, and 11.11% employed social strategy. Additionally, 14.81% of the participants employed a metacognitive strategy, while 11.11% employed affective strategy. Even with this, 7.41% of the respondents have not responded when asked about using the SILL. Furthermore, the SILL categories and academic writing performance scores are presented in Table 4.

Table 4. Students' language learning strategy in a blended learning situation

SILL	N	%
Memory Strategy	4	14.81
Cognitive Strategy	7	25.93
Compensative Strategy	4	14.81
Metacognitive Strategy	4	14.81
Affective Strategy	3	11.11
Social Strategy	3	11.11
NA	2	7.41

The scores for the academic writing performance of the participants can be classified as follows, according to the data presented in Table 5: (1) The compensatory strategy varies from 65.5 to 96, (2) The memory strategy varies from 78.5 to 80, (3) The social strategy varies from 51 to 87.5, and (4) The cognitive strategy varies from 81.5 to 94, (5) Affective strategy varies from 55 and 90.5, while metacognitive strategy received a score varies from 51 and 94.5.

Table 5. Students' SILL categories and AWP scores in a blended learning situation

Participants	SILL	AWP Score
AAD	Social	81
APW	Compensative	87.5
AZA	Memory	78.5
CDPE	Cognitive	88
DDS	Social	51
DNT	Affective	90.5
ER	Cognitive	89.5
FNR	Metacognitive	94.5
FMZ	Cognitive	91.5
FN	Cognitive	94
FAS	Memory	79
GYA	Compensative	65.5
GNA	NA	50.5
INT	Memory	79.5
IRM	Metacognitive	51
KML	Affective	67.5
LT	Metacognitive	94.5
MAM	Affective	55
MRF	Compensative	96
MNG	Social	87.5
SPR	Cognitive	81.5
RAR	NA	89
SZ	Metacognitive	75
SO	Cognitive	89.5
SP	Cognitive	93
SS	Memory	80
USD	Compensative	85

The findings from the questionnaire are presented in Table 6. The data indicates that most respondents frequently utilize memory strategies when composing academic writing in a blended learning situation. These strategies include employing creative English grammar and language and establishing connections between the subject matter

and prior knowledge to aid in the retention of information. Furthermore, participants exhibited a proclivity for reviewing and revising their previous written compositions to commit their mistakes to memory and determine the most suitable rectification methods.

Table 6. Students' memory language learning strategy in a blended learning situation

	Always	Often	Sometimes	Never
Memory strategies				
a. I connected the topic of my academic writing with my background knowledge.	29.6%	48.1%	22.2%	0%
b. I composed sentences employing novel English grammar and vocabulary in an effort to retain them.	18.5%	48.1%	33.3%	0%
c. I memorized new English terms (vocabulary) by writing them down repeatedly.	25.9%	29.6%	44.4%	0%
d. I revised my previous writings to memorize my mistakes and how to correct them.	37%	37%	25.9%	0%

Table 7 illustrates the cognitive strategies implemented by the participants in a blended learning situation. Their inclination to conscientiously examine various ideas and viewpoints to proficiently communicate their intended message in the context of their academic writing was recognized. Furthermore, they conducted an exhaustive examination of their written composition to ascertain how effectively they communicated their intended message. In addition, the participants employed formal language and specialized terminology to compose their academic writing. Conversely, a considerable proportion of the respondents (44.4%) produced numerous revisions of their written compositions. On the contrary, a significant percentage, precisely 25.9%, refrained from verbally reciting their written assignments to visualize and comprehend the intended significance and logic.

Table 7. Students' cognitive language learning strategy in a blended learning situation

		Always	Often	Sometimes	Never
Cognitive strategies					
a.	I explored different ideas to figure out what I wanted to say in my academic writing.	44.4%	51.9%	3.7%	0%
b.	I reviewed my writing to make sure that I have conveyed what I wanted to express in my writing.	44.4%	51.9%	3.7%	0%
c.	When I found discrepancies between the text I wrote and the ideas I wanted to express, I reviewed the previous section.	22.2%	66.7%	11.1%	0%
d.	When I was unsure of the accuracy of a language expression, I revised it.	40.7%	51.9%	7.4%	0%
e.	Even if there were spelling mistakes or grammatical errors, I still wrote down my thoughts as quickly as possible so that I would not forget them.	29.6%	40.7%	25.9%	3.7%
f.	I wrote several versions of my writing as drafts.	22.2%	33.3%	44.4%	0%
g.	To improve my academic writing skills, I read relevant books, articles and other materials.	37%	48.1%	11.1%	3.7%
h.	I rearranged paragraphs to organize my writing to make it more coherent.	22.2%	51.9%	22.2%	3.7%
i.	I evaluated the correspondence between my writing and the planned purpose of the writing	25.9%	55.6%	18.5%	0%

	to determine if revisions were required.				
j.	I paused writing for some time to reconsider my ideas with a fresher mind.	44.4%	40.7%	11.1%	3.7%
k.	I read my writing out loud to feel and experience the sense/meaning of my writing.	14.8%	29.6%	29.6%	25.9%
l.	In my writing, I used transition words (such as “thus “, “however”, and nevertheless”) that helped the reader in grasping my thoughts.	29.6%	44.4%	22.2%	3.7%
m.	When writing academic papers, I employed formal language and expressions.	44.4%	51.9%	3.7%	0%

Upon scrutinizing the data presented in Table 8, which concerns compensatory language learning strategies, it becomes evident that a significant proportion of the respondents (40.7%) acknowledged an occasional reliance on intuition when faced with challenges in choosing suitable vocabulary for academic writing in a blended learning situation. Although articulating a particular concept or idea in English proves challenging, a considerable number of participants opt to employ a dictionary or an automated translation system.

Table 8. Students’ compensative language learning strategy in a blended learning situation

		Always	**Often**	**Sometimes**	**Never**
Compensative strategies					
a.	I used synonyms when I was unable to find the precise word that I meant.	7.4%	63%	22.2%	7.4%
b.	When I did not know how to express something in English, I used a dictionary	51.9%	44.4%	3.7%	0%

	or an automatic translation system.				
c.	I employed repetition to keep my writing flowing.	14.8%	66.7%	18.5%	0%
d.	When I could not find the exact word I needed in my writing, I guessed based on intuition.	3.7%	48.1%	40.7%	7.4%
e.	I relied on many sources of anything when I needed more ideas to finalize my writing.	44.4%	44.4%	11.1%	0%
f.	I took a short break during the writing process to reflect on what I had written so far.	37%	51.9%	11.1%	0%

According to the results presented in Table 9, a considerable proportion of the respondents (33.3%) exhibited a proclivity for occasionally employing metacognitive techniques, such as premeditating or dallying with decisions regarding the substance, structure and linguistic composition of their academic writing in a blended learning situation. Moreover, a significant majority of the participants, exceeding 60%, consistently set objectives to enhance their academic writing proficiency in the short and long term. They adapted their academic writing product to meet the specific requirements of their audience, taking into account crucial components such as thesis statements, topics, and corroborating evidence. Simultaneously, a considerable percentage of the respondents, exceeding 60%, utilized unique frameworks in their academic writing to augment readers' comprehension. The correction of grammatical and punctuation errors and examination of concepts and organization constituted the primary focus of their editing procedure. Nevertheless, a significant proportion of the respondents (48.1%) indicated sporadic knowledge of the unique attributes linked to exemplary academic writing. An appreciable percentage of respondents (33.3%) also reported receiving sporadic acknowledgment of the efficacy of their writing methodologies.

Table 9. Students' metacognitive language learning strategy in a blended learning situation

		Always	Often	Sometimes	Never
Metacognitive strategies					
a.	I decided about the content, organization, and linguistic expression of my writing before or during the writing process.	14.8%	48.1%	33.3%	3.7%
b.	I organize my writing in advance or while writing, both in my mind and in writing.	33.3%	44.4%	18.5%	3.7%
c.	I planned the content and structure of my writing.	25.9%	59.3%	14.8%	0%
d.	I reverted back to my plan to consider the ideas I had written down and redrafted them if I felt the need.	25.9%	55.6%	14.8%	3.7%
e.	I established a goal of how to improve my long-term and short-term writing skills for myself.	14.8%	66.7%	18.5%	0%
f.	I thought about whether the ideas I conveyed in my writing were clear or not.	40.7%	51.9%	7.4%	0%
g.	I adjusted my writing with the readers' needs in mind.	14.8%	63%	22.2%	0%
h.	I paid attention to elements such as thesis statements, topics, and supporting sentences in my writing.	22.2%	70.4%	7.4%	0%
i.	I wrote with a specific purpose in mind (E.g. to convince, inform, narrate an event, argue, etc.).	33.3%	59.3%	7.4%	0%

j.	I was concerned about my lack of fluency in writing and took steps to improve it.	37%	51.9%	11.1%	0%
k.	I recognized my shortcomings in accuracy and took steps to improve them.	40.7%	51.9%	7.4%	0%
l.	In my writing, I employed certain structures to help readers understand my point of view.	11.1%	63%	22.2%	3.7%
m.	When revising my writing, my main priorities were ideas and organization, punctuation, and spelling.	25.9%	63%	11.1%	0%
n.	I was very familiar with the characteristics of quality academic writing.	11.1%	40.7%	48.1%	0%
o.	I was aware of the effectiveness of my writing strategy.	7.4%	59.3%	33.3%	0%

The data presented in Table 10 indicates that a significant proportion of the participants (44.4%) utilized affective language learning strategies in a blended learning situation. The success was achieved by consistently implementing self-motivating techniques, including verbal reinforcement using phrases like "come on" and "you can do it" to sustain their efforts in writing. Nevertheless, a considerable proportion of 48.1% opted not to document their contemplations regarding the academic writing process in a personal journal.

Table 10. Students' affective language learning strategy in a blended learning situation

	Always	Often	Sometimes	Never
Affective strategies				
a. I encouraged myself to fix the linguistic problems in my writing.	29.6%	51.9%	18.5%	0%
b. When I got an excellent grade for my writing, I rewarded myself.	22.2%	44.4%	22.2%	11.1%
c. I motivated myself to keep writing by saying, "come on" and "you can do it."	44.4%	37%	14.8%	3.7%
d. I recorded my feelings about the writing process in a diary.	11.1%	22.2%	18.5%	48.1%
e. When my writing was not as good as I wanted it to be, I worked through feelings of frustration, sadness, etc.	29.6%	48.1%	22.2%	0%
f. I was confident in my own writing ability.	18.5%	40.7%	29.6%	11.1%

Table 11 details the social language acquisition strategy implemented by the participants in a blended learning situation. A significant proportion, precisely 40.7%, consistently sought advice or received feedback from peers when confronted with challenges about their academic writing. Furthermore, it is worth noting that a significant proportion of the respondents (40.7%) occasionally sought the assistance of peers or experts in the field of academic writing in order to obtain feedback on their written projects. Conversely, a considerable proportion of the respondents (18.5%) opted not to assess their written work compared to their fellow students.

Table 11. Students' social language learning strategy in a blended learning situation

		Always	Often	Sometimes	Never
Social strategies					
a.	When I could not solve a problem related to my writing then I sought help or asked others to review my writing.	29.6%	40.7%	22.2%	7.4%
b.	I seek opportunities to improve my writing skills, such as frequently writing for others through emails, chats, and letters.	29.6%	29.6%	37%	3,7%
c.	I passed my writing to an acquaintance or someone who was an expert in writing for feedback.	11.1%	33.3%	40.7%	14.8%
d.	I compared my writing with that of my peers.	11.1%	33.3%	37%	18.5%

Furthermore, as demonstrated in Table 12, the research participants provided supplementary perspectives on the academic writing strategies that they employed to achieve favorable outcomes.

Table 12. Students' preferences on their LLS in a blended learning situation

Students' Language Learning Strategy (LLS)	%
Memory strategies	2.47%
Cognitive strategies	39.51%
Compensation strategies	14.81%
Metacognitive strategies	27.16%
Affective strategies	11.11%

Social strategies	4.94%

Table 12 presents the data indicating that 2.47% of the responses from students indicated a propensity to employ memory strategies when composing academic English papers in a blended learning situation. According to respondent **R#1**, she developed her ideas with the assistance of an outline before commencing the writing process.

A substantial percentage, precisely 39.51%, of the students' assertions scrutinized align with the implementation of cognitive strategies within the framework of their academic English writing, as indicated by the data presented in Table 12. Throughout the interview, participants elucidated on how they implemented cognitive strategies in a blended learning situation. **R#1** discovered that consulting relevant articles on Google and reviewing materials provided by the lecturers were beneficial in streamlining the writing process. Moreover, **R#2** confirmed that he initiated the preliminary manuscript when formulating the composition notion. Furthermore, he meticulously recorded each concept, composed an extensive report, and revised his work accordingly. **R#3** was also motivated to write frequently on particular subjects by the outstanding writing she encountered in various sources. Generally, she located pertinent research, read it, and summarized it to gain a deeper understanding of the subject.

Furthermore, as indicated by the data in Table 12, only 14.81% of the responses from the participants disclosed the use of compensatory strategies in their academic English writing in a blended learning situation. Respondent **R#1** disclosed during the interview that she employed various devices and platforms powered by artificial intelligence to assist her with the composition process. Additionally, **R#2** asserted that the first stage entails accessing various preexisting reference materials to aid in the conception of writing concepts. This can be achieved by searching for academic articles on platforms like Google Scholar. Furthermore, by employing various technological tools to foster and revise her writing concepts, **R#3** demonstrated her commitment to the revision procedure.

Based on the data presented in Table 12, it is apparent that 27.16% of the respondents reported employing metacognitive techniques concerning English academic writing in a blended learning situation. The participants provided additional clarification regarding these approaches throughout the interview. According to respondent **R#1**, she accomplished her writing objectives by utilizing an outline and critical thinking. She also actively pursued pertinent information to enhance her writing skills. Furthermore, according to **R#2**, he meticulously reviewed his work, revised it, incorporated changes, and expanded it to align with her intentions. However, **R#3** expressed that she approached the production of the intended quantity and quality of content with great deliberation.

The findings presented in Table 12 indicate that participants in the study employed affective strategies in academic English writing in a blended learning situation for a mere 11.11% of the respondents. Respondent **R#1** disclosed, via additional interviews, that she attempted to maintain a positive attitude while writing, as she believed that being in a good mood would facilitate the generation of ideas for the paragraphs she developed. Furthermore, it was **R#2**'s conviction that he operated most effectively when surrounded by tranquility and goodwill. His objective was to locate a location characterized by a serene atmosphere and a comfortable temperature. **R#3** also elaborated that she planned her writing sessions to occur during her peak productivity period and interspersed them with mentally stimulating activities.

The analysis of the statements in the study revealed that only a minor percentage, precisely 4.94%, were pertinent to implementing social strategies in a blended learning situation, as indicated by the data in Table 12. **R#1** disclosed during the interview that she utilized Google, participated in discussions with her peers and lecturers, and sought guidance from her peers and lecturers in order to enhance her understanding of effective writing.

Discussion

The primary focus of the research outcomes pertains to the examination of data concerning autonomous learning (AL), the strategy inventory for language learning (SILL), and the correlation between these

variables and the academic writing performance (AWP) of the participants in a blended learning situation.

The participants were initially categorized based on their autonomous learning (AL) levels. Before commencing the study, the participants were divided into two groups according to their degrees of autonomous learning. Autonomous learning refers to the ability of a learner to direct their study trajectory independently, making well-informed choices concerning the subject matter, schedule, and approach of their educational pursuits (Khasawneh et al., 2024; Peralta-Castro, 2023). The present study examined 27 students, of which 14 were classified as high-autonomous learners, and the remaining 13 were classified as low-autonomous learners.

The results of the study indicate that a considerable number of students demonstrated an elevated degree of autonomous learning in a blended learning situation. Students who exhibit initiative and autonomy in their learning have been identified as critical determinants that potentially contribute to greater levels of achievement in academic writing. The assertion illustrates how self-regulated learning (SRL) and self-efficacy (SE) can be effectively combined. Self-efficacy (SE) is defined as an individual's conviction in their capability to execute the requisite actions in order to attain a particular performance objective (Bandura, 1982; Shengyao et al., 2024; Shkëmbi & Treska, 2023). It signifies the conviction that an individual can control their motivations, behaviors, and social surroundings. In addition, self-regulated learning (SRL) is an advantageous and constructive cognitive process wherein people actively govern their cognition, motivation, and behavior in order to assume accountability for their learning (K. Wang & Zhu, 2019; Zimmerman, 2001). Self-regulated learning (SRL) and self-efficacy (SE) are two aspects of students' academic writing processes demonstrated by autonomous learning in blended learning.

Furthermore, the researchers assessed the academic writing performance (AWP) of every participant in relation to their degrees of autonomous learning in a blended learning situation. Varying in nature, the concept of variability in academic writing prompts (AWP) pertained to the capacity of students to produce academic-level compositions, taking into account numerous factors, including structure, grammar,

sentence construction, content, and format (Oshima & Hague, 2006). Students' ability to apply the writing components effectively is a prerequisite for their academic writing abilities. In a blended learning setting, the students use autonomous learning to hone their academic writing skills, including the writing components.

The findings reveal considerable variation in performance levels among individuals categorized as low-autonomous learners, as evidenced by the performance ratings in academic writing that spanned from 50.5 to 96. Certain students managed to attain a comparatively diminished score of 50.5 on their academic writing, whereas others exhibited a markedly elevated level of achievement, attaining a score of 96.

Within the range of 51 to 94.5, students' academic writing performance scores were categorized as high-autonomous. Furthermore, this group of participants exhibited diverse outcomes, as some approached the uppermost limit (94.5) of the score scale while others attained comparatively lesser performance levels (51).

The findings that there is a notable disparity in academic writing performance evaluations between students classified as high autonomous learners and those classified as low autonomous learners suggest that factors unrelated to autonomous learning contribute to the development of participants' writing skills in a blended learning situation. Prior writing experience in a blended learning environment is one potential determinant (Challob et al., 2016; Henriksen et al., 2022; Lin et al., 2022; Wong et al., 2020). Students exposed to writing in various contexts became more aware of distinct writing styles, structures, and strategies. Engaging in this dialogue has the potential to enhance their aptitude for generating insightful and refined academic compositions. In addition, the ability of a learner to compose proficiently in the language of instruction, which is frequently utilized in academic articles, can significantly influence their writing capabilities (Llosa & Malone, 2019; Teng et al., 2022). The enhancement of overall language competence is achieved through advanced language skills, which enable students to articulate their thoughts with greater precision and employ a more comprehensive array of grammatical structures and vocabulary.

Moreover, in terms of their aptitude for assimilating and analyzing information, disparate learners demonstrate unique preferences. Certain students may exhibit exceptional performance when visual aids are utilized, whereas others find hands-on activities or discussions more appealing (Alkubaidi, 2014; Elander et al., 2006; Rochford, 2003). It is worth noting how distinct learning preferences influence students' understanding and implementation of concepts in academic writing. In addition to knowledge backgrounds and cultural norms, students' writing styles, tones, and attitudes can be impacted by these factors (Çandarli et al., 2015; Hyland, 2012). The degree to which they conform to the academic writing standards set forth by a particular institution or field is influenced by many factors.

Significant insights into the language learning strategies employed by the participants are available through the analysis of data obtained from the SILL (Strategy Inventory for Language Learning) study in a blended learning context. The study examined how the participants utilized various strategies, thereby revealing their preferred methods for attaining proficiency in academic writing. Concerning academic writing performance, participants vary considerably in their preferred methods of interacting with and retaining language-related information. A memory strategy utilization rate of approximately 14.81 percent was observed among the participants. These strategies consist of methods intended to improve information retrieval and retention. This implies that there is a particular cohort of learners drawn to methods that aid in memorizing language components such as vocabulary and grammatical rules (Jarratt et al., 2009; Ransdell et al., 2002). Furthermore, as stated in the text, these memory strategies encompass methodologies intended to enhance the capacity to retrieve and hold information in memory.

Furthermore, the findings suggest that a specific subset of candidates prefers utilizing methods that aid the memory process. There are several strategies that can improve academic writing performance, including the utilization of mnemonic devices, spaced repetition methods, visualization techniques, and the establishment of associations between recently learned language components and prior knowledge (Cuccu, 2015). As an initial step in acquiring a language, the individuals comprising this specific cohort may place significant emphasis on the

method of robotic memorization. The comprehensive approach these students may opt for is highlighted when vocabulary and grammatical norms are incorporated into academic writing committed to memory (Amiri & Puteh, 2017; Ullman, 2001). They are committed to attaining proficiency in vocabulary and grammar, recognizing the critical importance of these elements in both language comprehension and expression.

The research results also indicate that a considerable proportion of the respondents (14.81%) utilized compensatory strategies to overcome deficiencies in their academic writing abilities. Compensatory strategies encompass implementing alternative methods or adaptive processes to surmount challenges that may arise in a specific aptitude, with a particular emphasis on language skills. This discovery highlights that a considerable number of students are actively pursuing strategies to efficiently address difficulties, specifically regarding their academic writing performance (Stockall & Villar Cole, 2016). Furthermore, these compensatory strategies serve as an indication of the students' drive to achieve academic success. Instead of allowing their language deficiencies to deter them, they actively seek solutions that will enable them to overcome these obstacles (Cabrejas-Peñuelas, 2012; Peñuelas, 2012). This observation may indicate that the participants possessed a degree of astuteness and flexibility.

In addition, how academic writing is taught and the course of language acquisition are profoundly influenced by the implementation of compensatory strategies in academic institutions and by lecturers (Margolis, 2001). Given students' widespread adoption of alternative instructional strategies, it could be advantageous for educators to incorporate these concepts into their teaching methodologies. This may require students to participate in dialogue and share various approaches that they have found effective in overcoming challenges associated with language proficiency.

It is crucial to consider the possible disadvantages of excessive dependence on compensatory strategies. While these strategies might aid students in surmounting immediate challenges, they can hinder the development of their foundational language skills (Medina, 2010; Pessoa et al., 2014). Students who consistently rely on alternatives and

circumventions may overlook the chance to improve their academic writing skills through concentrated study and practice. Furthermore, it is a positive sign of their drive and capability to efficiently employ the resources at their disposal (Chae, 2013). Nevertheless, it is critical to assess any possible drawbacks of this circumstance thoroughly. The implications of the study's findings extend to academic writing and language learning instructional strategies. Consequently, lecturers might be motivated to explore approaches for integrating effective compensatory strategies into their pedagogical methodologies, focusing on augmenting overall language proficiency.

The utilization of cognitive strategies was reported by approximately 25.93% of the participants, representing a significant proportion. Mental processes such as critical thinking, problem-solving, and higher-order reasoning are often incorporated into cognitive strategies (Kim et al., 2011). A significant portion of the population favors comprehensive language exploration, placing comprehension and practical application above rote memorization or compensatory strategies (Sethuraman & Radhakrishnan, 2020). Moreover, this discovery implies that a considerable number of students who, when completing academic writing tasks, necessitate approaches beyond mere memorization by rote or remedial techniques. On the contrary, they adopt a rhetorical approach that is more profound and involved.

The students' inclination towards cognitive strategies signifies that they place importance on thoroughly understanding the subject matter (Ke et al., 2016; Marlin; Saehu, A.; Yunandayani, 2021). Moreover, students with this disposition tend to analyze concepts critically, delve into complex ideas, and implement their understanding effectively within a significant framework. This approach adheres to the principles of experiential learning and active participation, in which students actively generate knowledge rather than relying solely on their memory.

The application of cognitive strategies in academic writing can yield numerous beneficial outcomes. Students with cognitive strategies would probably produce exceptional written work (Booth Olson et al., 2023; Kim et al., 2011). Students can produce essays and papers that exhibit improved organization, logical coherence, and substantial content by prioritizing critical analysis and problem-solving. Furthermore,

implementing cognitive strategies entails cultivating critical thinking skills (Davoudi & Sadeghi, 2015; Kellogg, 1987). Developing this skill contributes to academic achievements, promotes continuous learning throughout life, and facilitates making sound decisions.

More often than not, the students ought to be tolerant of a superficial comprehension of the material. Conversely, individuals try to implement the knowledge they have gained across various contexts (Wischgoll, 2016). This aspect assumes an especially significant role in academic writing, where the capacity to synthesize and apply information is paramount. Conversely, cognitive strategies play a pivotal role in promoting significant learning and are associated with improved information retention over the long term (Mitsea & Drigas, 2019). Students who establish a profound connection with the material are more inclined to retain and apply it proficiently in subsequent instances. Applying cognitive strategies demonstrates the cognitive capacities required in various professional settings (Billing, 2007). Rational thinking, practical problem-solving, and critical analysis abilities are highly valued in the professional environment. Additionally, a predilection for cognitive strategies implies autonomy in academic writing, in which students undertake accountability for their own learning and employ a self-guided methodology (Pitenoee et al., 2017).

Further, the research results suggest that approximately 11.11% of the respondents incorporated social strategies into their academic writing. Social strategies are those that individuals use to engage in collaborative or conversational exchanges with others in order to improve their language proficiency. Examples of such strategies include actively pursuing opportunities for dialogue or cooperation. Additionally, this discovery suggests that specific individuals prefer gaining knowledge via collaborative and social interactions (Deri, 2022). This subject clarifies the social strategies individuals utilize to acquire language proficiency through active interpersonal interactions. Pursuing opportunities for cooperation or communication is required (Abdollahzadeh, 2010; Maghsoudi, 2013). This concept emphasizes the significance of social connections and interpersonal exchanges in developing language skills demonstrated in academic writing.

By implementing social strategies, students can enhance their language proficiency and knowledge in the context of academic writing performances. This is accomplished by actively participating in social environments, emphasizing the importance of engaging in cooperative endeavors or interactive discussions (Sun & Chang, 2012). This approach underscores the significance of transcending inert methodologies, such as independent study or reading, to effectively acquire knowledge. By integrating social strategies into academic writing, a multitude of benefits may be realized. Students who employ these strategies may experience improved linguistic proficiency, enhanced communication skills, and a deeper understanding of the subject matter (Douglas, 2012; Kornhaber et al., 2016; Paltridge & Starfield, 2012). In addition, participation in collaborative endeavors can provide abundant perspectives and ideas, thereby augmenting the quality of academic writing. This observation emphasizes students' wide range of learning preferences and highlights the possible advantages of integrating social learning components into the academic writing process in academic settings.

Conclusion

The pedagogical implementation in blended learning situations that is a result of remote teaching is centred on ensuring that students have the requisite competencies and accounting for their propensity for autonomous learning. Furthermore, an academic writing course that is dedicated to improving the written English proficiency of college students extensively examines this subject. In a blended learning setting, language learning strategies (LLS) can be attributed to a proportional amount of credit for improving students' writing. Student's behaviour helps to produce an interesting and flexible writing process. In addition, the students are able to achieve their objectives of self-regulation, autonomous study, and increased proficiency by utilizing the appropriate LLS.

According to the research findings, a significant proportion of the student body exhibited an increased level of autonomous learning in a blended learning environment. The degree to which students show initiative and autonomy in their academic endeavours determines how well they achieve in academic writing. This is a case study of the effective fusion of self-efficacy (SE) and self-regulated learning (SRL) which also implies that students can influence others' social settings, behaviour, and

motives. In addition, self-regulated learning (SRL) is a cognitive process that is both constructive and advantageous, in which individuals actively manage their motivation, cognition, and behaviour in order to take responsibility for their learning.

We can find the language learning strategies used by the participants through a thorough investigation of the SILL (Strategy Inventory for Language Learning) data. The study looked at the strategies the participants used, therefore exposing their favoured strategies for achieving academic writing competency. Significant variation is observed in the preferable strategies by which participants engage with and retain language-related information in relation to academic writing performance.

Despite the fact that this study has made numerous significant contributions, it is constrained by a number of factors, such as the extent of investigation, data analysis, and participant perspectives. This research's investigative scope was initially restricted to autonomous learners and strategy inventory for language learning, which are linked to the academic writing performance of students. Different language skills must be employed to explore alternative methods of understanding learning concepts. In addition, the finding's generalizability to larger populations may be restricted by the relatively small sample size (27 participants). Biases in the data collection procedure may result from the dependence on self-reported data (from the SILL and AL questionnaire). The researchers also indicated that the results may be context-dependent, as integrated learning environments differ across educational settings.

Following this, the data were categorized thematically and descriptively. Future research will likely utilize more exploratory or critical analysis methodologies. The participants' perspectives were eventually unified under the students' agenda. A more comprehensive understanding of autonomous learners and a strategy inventory for language learning should be achieved by considering a more comprehensive range of participants' perspectives.

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