

GENDER DIFFERENCES IN SELF-REGULATED WRITING STRATEGIES AMONG INDONESIAN EFL SENIOR HIGH SCHOOL STUDENTS

Salsabila Saifa Fitra Ichwany^{1*}, Ekaning Dewanti Laksmi², Evi Eliyanah³

^{1,2,3}Universitas Negeri Malang, Jl. Semarang No. 5 Malang, Jawa Timur, 65145, Indonesia
lsalsabilasaifa96@gmail.com

Abstract

This study investigated Indonesian senior high school students' self-regulated writing (SRW) strategies in composing analytical exposition text and examined gender differences in SRW strategy use. While prior research had explored SRW strategies across various contexts, limited attention had been given to high school learners across gender and within specific genres, resulting in an incomplete understanding of how these strategies were employed in context-specific writing tasks. This study employed a quantitative descriptive design, involving 110 eleventh-grade students from a reputable public high school in Malang, Indonesia. Data were collected using the Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ) and were analyzed through descriptive statistics and independent sample t-test. The findings revealed that students demonstrated a high level of SRW strategy use ($M = 3.30$), with social-behavioral strategies emerging as the most often utilized ($M = 3.38$), while metacognitive strategies were the least employed ($M = 3.19$). Although female students reported slightly higher use of SRW strategies ($M = 3.32$) than males ($M = 3.26$), no statistically significant gender difference was found ($p = .384$, Cohen's $d = 0.17$). Theoretically, these findings refined the understanding of SRW as a context-sensitive construct by suggesting that SRW strategy use may be shaped more by contextual learning demands than by gender differences alone. Pedagogically, the study may benefit English teachers and curriculum practitioners by highlighting the importance of integrating explicit metacognitive strategy instruction alongside collaborative learning practices to enhance students' writing development, particularly in demanding genres such as analytical exposition text.

Keywords: Analytical Exposition Text; Gender Differences; Indonesian EFL Students; Self-Regulated Writing Strategies.

INTRODUCTION

Despite its central role in academic success, writing remains one of the most challenging skills for second and foreign language learners. Beyond demonstrating linguistic competence, writing requires learners to coordinate higher-order thinking, organization, and self-management. In many educational contexts, including EFL settings, students are increasingly expected to produce written texts that reflect critical thinking, coherence, and independent learning ability. However, writing remains a persistent challenge, particularly for adolescent learners who are still developing linguistic competence and self-regulatory capacity.

In Indonesia, this issue becomes increasingly important within the Merdeka Curriculum, which emphasizes learner-centeredness, autonomy, and reflective learning (Hutabarat et al., 2025). Despite this emphasis, Indonesian EFL students continue to face difficulties in organization, vocabulary, grammar, and content development, as well as affective aspects such as motivation and self-confidence (Irawati et al., 2020; Sartika et

al., 2023). These challenges are particularly critical at the senior high school level, where students are expected to engage in cognitively demanding writing tasks while simultaneously learning to regulate their process independently.

Writing requires learners to simultaneously manage multiple cognitive, linguistic, and affective processes. Learners are expected not only to generate ideas and organize arguments, but also monitor language use, revise their work, and maintain motivation through the writing process (Graham, 2007). Such complexity suggests that successful writing depends not merely on linguistic knowledge but also on learners' ability to regulate their writing process. One genre that reflects these demands is analytical exposition text, which requires students to state positions, develop logical arguments, and maintain coherence throughout the text (Anderson & Anderson, 1997; Martin & Rose, 2008). As demonstrated by Matsumura et al. (2015), the cognitive demands of writing assignments predicted multiple features of students' writing performance, including their ability to organize their writing. Hence, learners may apply self-regulatory processes such as planning, monitoring, and evaluating, reflecting their writing organization.

Considering this issue, an appropriate strategy is needed to support the students' writing process and outcomes. One approach that has received considerable attention in supporting writing development is self-regulated writing (SRW), which refers to learners' ability to actively manage their writing process through cognition, metacognitive, social, and motivational strategies (Teng and Zhang, 2016). Previous studies have shown that SRW contributes to improved writing quality and supports students' writing development (Ahmed, 2023; Forbes, 2019; Kartika 2015; Roderick, 2019; Teng & Huang, 2018; Zimmerman & Bandura; 1994). These strategies operate across the writing process, enabling learners to set goals, monitor progress, and evaluate their performance. Through this process, learners not only become more independent writers, but also develop greater learner autonomy, which has been associated with improved writing quality (Cer, 2019).

A growing body of research has examined the use of SRW strategies among EFL learners. However, SRW strategy use is not similar across learners. Previous studies have generally revealed that while students tend to employ SRW strategies at moderate to high levels, they tend to rely more heavily on certain dimensions, particularly social-behavioral strategies such as seeking help from peers, teachers, and other resources (Abadikhah et al., 2018; Umamah et al., 2022; Umamah and Cahyono, 2022). From a socio-cognitive perspective, self-regulation is influenced by the reciprocal interaction among personal, behavioral, and environmental factors (Bandura 1986; Zimmerman, 1989). Since SRW involves learners' ability to manage cognitive, metacognitive, motivational, and social processes during writing, differences in personal characteristics may affect how learners utilize self-regulatory strategies.

Gender is considered important in writing research not merely as a demographic category, but as a socially constructed factor that may influence learning behaviors and academic engagement, which may contribute to differences in how male and female students approach learning process and academic tasks. As demonstrated by Bussey and Bandura (1999), gender-related beliefs and behaviors are developed through social interactions and cultural expectations rather than being solely determined by biological factors. Consequently, these gender-related experiences may influence individuals' motivation, emotional regulation, learning behaviors, and responses to learning

environments, all of which are closely related to self-regulatory processes that influence academic performance.

In language learning contexts, previous studies reported that female students often employ a wider range of learning strategies and demonstrate greater use of social and affective strategies than male students (Kineş, 2021). Nevertheless, the consistency of these differences remains debated across contexts, suggesting that gender-related variations in learning behavior may be shaped by contextual and instructional factors. Such findings indicate that gender may influence how students plan, monitor, evaluate, and manage their writing process. Therefore, examining gender differences in SRW strategies may provide a deeper understanding of how students regulate their writing and respond to writing demands.

Previous studies have reported mixed findings regarding the relationship between gender and SRW strategies. While several prior works reveal that female students outperform males in applying SRW strategies (Dinsa, 2023; Teng & Huang, 2018; Woo & Kim, 2024), other studies have found no significant gender differences (Umamah et al., 2022; Zhang et al., 2026) or inconsistent patterns across contexts. Rather than merely indicating contradictory findings, these results reveal a theoretical issue concerning the role of gender in SRW strategies that remains inconclusive and may be context-dependent. Specifically, it remains unclear whether gender influences SRW as a multidimensional construct or whether its influence is limited to particular dimensions of SRW, such as cognitive, metacognitive, motivational, or social strategies. Since most existing studies have focused on overall SRW scores, the extent to which different dimensions of SRW may vary across gender remains insufficiently understood.

Methodologically, existing studies have largely examined SRW among university-level learners within general writing tasks, with limited attention given to senior high school students and genre-specific writing contexts. This focus may overlook important variations in SRW strategy use, as self-regulatory capacities are still developing during adolescence and may function differently from those of adult learners.

Further, prior studies have predominantly examined SRW in general writing tasks, with little attention to specific genres such as analytical exposition texts, which requires students to construct more complex arguments, evaluate evidence, and maintain logical coherence. Consequently, the limited evidence concerning Indonesian senior high school learners may restrict the applicability of existing findings to local educational contexts, particularly within the Merdeka Curriculum, which emphasizes learner autonomy and self-regulated learning (Hutabarat et al., 2025). Therefore, there remains limited understanding of how different SRW dimensions are employed by male and female high school learners when engaging in specific and cognitively demanding writing tasks such as analytical exposition text.

In response to these gaps and in line with Teng and Zhang's (2016) suggestion to enhance the generalizability of SRW research by incorporating diverse learner variables, this study investigates Indonesian senior high school learners' use of self-regulated writing strategies in composing analytical exposition texts, with a particular focus on gender differences. Theoretically, it contributes to the SRW literature by extending the understanding of SRW as a multidimensional and context-sensitive construct, particularly

by examining how its cognitive, metacognitive, motivational, and social dimensions are distributed across gender. Pedagogically, the findings are expected to provide insights for English teachers in designing writing instruction that better supports students' strategic writing development, especially in teaching analytical exposition writing. Practically, the study offers empirical evidence from the Indonesian senior high school context that may inform curriculum implementation and classroom practices aimed at fostering students' self-regulated learning and writing autonomy. Specifically, this study addresses the following research questions: (1) Which dimensions of self-regulated writing (cognitive, metacognitive, social, and motivational) are most frequently used by Indonesian senior high school students in writing analytical exposition texts? (2) Are there significant differences in the use of SRW strategy dimensions between male and female students?

METHOD

Research Design

This study employed a quantitative descriptive survey design to examine Indonesian senior high school students' use of self-regulated writing (SRW) strategies and to compare their strategy use across gender. This design was considered appropriate because the study aimed to identify the level and distribution of SRW strategy use without manipulating instructional treatment or classroom conditions. The survey design also enabled the researcher to collect standardized self-report data from a relatively large group of students and to examine patterns of SRW strategy use across cognitive, metacognitive, social-behavioral, and motivational-regulation dimensions.

Participants

The study was conducted at a public senior high school in Malang, Indonesia. The participants were 110 eleventh-grade students selected through purposive sampling. The inclusion criteria required participants to (1) have completed a unit on analytical exposition text and (2) have prior experience in writing this genre. The researcher then reported the inclusion criteria to the English teacher, ensuring the participants recommended by English teacher were based on the criteria.

Further, the English teacher assisted in identifying classes that had completed the analytical exposition unit prior to data collection. The teacher's role was limited to confirm students' eligibility based on the predetermined criteria rather than selecting participants according to academic ability, writing performance, or other characteristics. To minimize potential selection bias, all students within the selected classes who met the inclusion criteria were invited to participate in the study.

The participants included 40 male students (36%) and 70 female students (64%), aged between 15-17 years. The unequal number of male and female students reflects the natural composition of the selected classes, where female students outnumbered male students in each of classes. This imbalance was not intentionally designed but was maintained to preserve the authenticity of the classroom context.

Table 1. Demographic Information of the Research Participants

Gender	Percentage	Frequency	Age
Male	36%	40	15-17
Female	64%	70	

Instrument

Data were collected using the Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ) developed by Teng and Zhang (2016). This instrument is designed to measure students’ SRW strategies use in second language writing context. It consists of 40 questionnaire items, measuring four dimensions of SRW strategies: cognitive, metacognitive, social-behavioral, and motivational-regulation strategies. The questionnaire was relevant to both research questions because it allowed the researcher to identify students’ overall and dimensional SRW strategy use and to compare the scores between male and female students.

Each item was rated on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). All items are written in positive statements. Therefore, the researcher did not apply reverse coding to obtain the total score. The questionnaire was translated into Indonesian to ensure clarity and participants’ understanding in filling the form and to minimize potential misunderstanding arising from language differences.

The translation process involved adapting the original English items into Indonesian while maintaining their conceptual meaning within the context of self-regulated writing. To establish content validity, the translated version was reviewed and validated by an expert, a doctoral lecturer in Applied Linguistics specializing in writing and English language teaching. The validation process focused on evaluating semantic equivalence between the English and Indonesian versions, clarity of wording, language appropriateness, and the relevance of translated expressions to the intended meaning of each item. Specifically, the validator reviewed whether the Indonesian translation accurately reflected the meaning of the original questionnaire items and provided suggestions for revision where necessary. Based on the feedback, several items were refined to improve clarity and equivalence.

Although back-translation was not conducted in the present study, semantic equivalence was strengthened through expert judgment, comparison with the original meaning, and revision of potentially unclear wording before pilot testing. Therefore, the instrument was treated as an expert-validated Indonesian adaptation of the original WSSRLQ.

Data Collection and Analysis

Prior to the main data collection, a pilot study was conducted to a group of 17 students who were not part in the main sample. The purpose of the pilot study was to evaluate whether the translated and validated questionnaire that is adopted from Teng and Zhang (2016) was comprehensible to the students or not. The pilot data then were analyzed using SPSS version 26 to assess reliability. The results indicated high internal

consistency, with an overall Cronbach's alpha 0.913. The reliability coefficients for each dimension were as follows: cognitive ($\alpha = .868$), metacognitive ($\alpha = .707$), social-behavioral ($\alpha = .851$), and motivational regulation ($\alpha = .815$), all is beyond the acceptable threshold of 0.70, indicating satisfactory reliability.

Following the pilot testing, the final questionnaire was administered online via Google Forms. Prior to participation, students were informed about the purpose of the study and provided consent by selecting an agreement option before filling the questionnaire. Data collection was conducted in the classroom setting under the researcher's supervision. The collected data were analyzed using both descriptive and inferential statistics by implementing SPSS version 26. Descriptive statistics, including mean score and standard deviations, were utilized to report students' overall level and frequency of SRW strategy use, as well as the distribution across the four dimensions.

To interpret students' levels of SRW strategies, the mean scores were categorized into three levels (low, moderate, and high) based on the classification proposed by Oxford and Burry-Stock (1995), which has been widely applied in strategy-based educational research. In addition, mean scores were calculated separately for each SRW dimensions—cognitive, metacognitive, social-behavioral, and motivational-regulation—to identify the most and least frequently used strategies. The mean scores ranging from 1.0-2.4 were categorized as low, 2.5-3.4 as moderate, and 3.5-4.0 as high levels of strategy use. The categorization was employed to facilitate interpretation of students' SRW strategy use and comparison across the four SRW dimensions.

To address the second research question, inferential statistics were employed to investigate the differences between the SRW strategies dimension across gender, in which an independent samples *t*-test was utilized to do so. Prior to conducting the analysis, the assumptions of normality and homogeneity of variance were examined. The Shapiro-Wilk test indicated that SRW scores were normally distributed for both male students ($W = .973$, $p = .443$) and female students ($W = .971$, $p = .100$). In addition, Levene's test demonstrated that the assumption of homogeneity of variance was satisfied ($F = .002$, $p = .962$). Therefore, the use of independent-samples *t*-test was considered appropriate. To complement significance testing, Cohen's *d* was calculated to determine the magnitude of gender differences in SRW strategy use.

FINDINGS

SRW Strategy Use among Students

The analysis revealed that Indonesian senior high school students demonstrated a relatively frequent use of self-regulated writing (SRW) strategies when composing analytical exposition text. The overall mean score was 3.30 ($SD = 0.36$), with students' scores ranging from 2.53 to 4.00. This result indicates that the participants generally engaged in various forms of writing regulation, including managing content, monitoring writing progress, seeking feedback, and maintaining motivation during the writing process. The relatively small standard deviation further suggests that the use of SRW strategies was not limited to a small number of students but represented a fairly consistent tendency across the participants.

SRW Strategies Dimensions

Further analysis examined students’ use of SRW strategies across dimensions, involving cognitive, metacognitive, social-behavioral, and motivational-regulation strategy, to identify which SRW dimensions were most and least frequently used as presented in Table 2. However, the distribution was not completely balanced. Social-behavioral strategies obtained the highest mean score (M = 3.38, SD = 0.46), followed closely by motivational-regulation strategies (M = 3.37, SD = 0.42). Cognitive strategies were also frequently used (M = 3.21, SD = 0.42), while metacognitive strategies received the lowest mean score among the four dimensions (M = 3.19, SD = 0.51).

Table 2. Descriptive Statistic of Students’ SRW Strategy Dimensions

Dimension	N	Mean	Std. Dev
Cognitive	110	3.21	.42256
Metacognitive	110	3.19	.50756
Social-Behavioral	110	3.38	.45990
Motivational-Regulation	110	3.37	.41783

Analysis across SRW dimensions revealed a clear pattern. Social-behavioral (M = 3.38) and motivational-regulation strategies (M = 3.37) were the most frequently employed dimensions, whereas metacognitive strategies were the least applied (M = 3.19), although still indicating relatively frequent use. This pattern suggests that students tended to regulate their writing more strongly through external support and motivational control than through higher-order planning, monitoring, and self-evaluation. The prominence of social-behavioral strategies indicates that students frequently relied on feedback, discussion, and support from others during the writing process. In contrast, the relatively lower mean score of metacognitive strategies suggests that students may have been less accustomed to independently planning, monitoring, and evaluating their writing development.

The item-level pattern further supports this interpretation. Within the social-behavioral dimension, receiving and using teacher feedback emerged as one of the most frequently reported strategies, indicating the central role of teacher guidance in students’ writing regulation. Meanwhile, collaborative writing was reported less frequently, suggesting that although students valued external support, they appeared to depend more on teacher feedback than on peer-based writing collaboration. In the cognitive dimension, students most frequently reported checking whether the content of their writing was clearly expressed, whereas reviewing course materials was less frequently used. This indicates that students paid attention to the clarity of their written product but may not have consistently used previously learned materials as resources for writing.

A similar tendency was found in the metacognitive dimension. Students frequently used online resources to help generate ideas before writing, but reading related articles was among the least frequently reported strategies. This pattern suggests that students’ planning practices were more practical and immediate rather than deeply reflective or research-based. In the motivational-regulation dimension, students tended to make

writing more enjoyable and personally meaningful, while competition-based motivation was less frequently used. This finding indicates that students were more likely to regulate motivation through personal interest and emotional engagement than through comparison or competition with peers.

Gender Comparison of SRW Strategy Dimensions

Gender comparison also showed a highly similar pattern. Female students reported slightly higher overall SRW strategy use ($M = 3.32$, $SD = 0.35$) than male students ($M = 3.26$, $SD = 0.37$). However, the difference was not statistically significant, $t(108) = -0.874$, $p = .384$, with a small effect size (Cohen's $d = 0.17$). This result indicates that gender had negligible practical influence on students' overall SRW strategy use in the present context.

As displayed in Table 3, male and female students utilized cognitive, metacognitive, social-behavioral, and motivational-regulation strategy at high level (between 3.01-4.00), suggesting that self-regulated writing strategies commonly regardless of gender. Although the female students reporting slightly higher levels in cognitive ($M = 3.23$ vs 3.18), metacognitive ($M = 3.21$ vs 3.12), and motivational-regulation strategies ($M = 3.40$ vs 3.33), the differences were minimal and not statistically significant (all Sig. values > 0.05). Meanwhile, social-behavioral strategies showed identical mean scores for both groups ($M = 3.38$), indicating a similar reliance on feedback and external support across gender.

Table 3. Comparison of Dimension of SRW Strategies Across Gender

Dimension	Gender	N	Mean	Sig. (2-tailed)	t	df	Cohen's d
Cognitive	Male	40	3.18	.548	-0.60	108	0.12
	Female	70	3.23				
Metacognitive	Male	40	3.12	.258	-1.14	108	0.22
	Female	70	3.21				
Social-Behavioral	Male	40	3.38	.955	0.06	108	0.01
	Female	70	3.38				
Motivational-Regulation	Male	40	3.33	.400	-0.85	108	0.17
	Female	70	3.40				

The independent-samples t -tests revealed no statistically significant gender differences across any SRW dimension. For the cognitive dimension, the difference between male and female learners was not significant, $t(108) = -0.60$, $p = .548$, $d = 0.12$, indicating a negligible effect size. Similarly, no significant differences were found in the metacognitive dimension, $t(108) = -1.14$, $p = .258$, $d = 0.22$, although female students reported slightly higher use of metacognitive strategies. The social-behavioral dimension showed identical scores across gender, $t(108) = 0.06$, $p = .955$, $d = 0.01$, indicating almost

nonexistent effect. Likewise, the motivational-regulation dimension did not differ significantly between both groups, $t(108) = -0.85$, $p = .400$, $d = 0.17$.

Overall, the effect sizes across all dimensions ranged from negligible to small, indicating that gender had minimal practical influence on students' use of all dimensions of SRW strategies, including cognitive, metacognitive, social-behavioral, and motivational-regulation, when composing analytical exposition texts.

Item-Level Patterns

At the item level, several patterns are worth noting. Students most strongly emphasized content clarity, teacher feedback, and making writing more enjoyable. In contrast, they reported lower engagement with reviewing course materials, reading related articles before writing, collaborative writing, and competition-based motivation. These tendencies support the dimension-level finding that students' SRW was strongly supported by feedback and motivation, whereas pre-writing planning and independent metacognitive engagement were comparatively less dominant.

Minor item-level variations were observed across gender. Male students most frequently reported setting goals to guide their writing, whereas female students had a higher tendency to utilize online resources during the planning process. Within motivational regulation, male students had a higher concern in achieving good grades, while female student reported a greater tendency in improving their writing quality by employing higher use of self-encouragement. Despite these variations, both groups demonstrated lower engagement in strategies associated with pre-writing activities, such as reading related articles, and in both externally and internally driven motivational strategies, such as persistence-related strategies for male students and competition-based motivation for females. Overall, the findings indicate that male and female students shared largely comparable SRW profiles, with only slight differences in how they regulated planning and motivation during writing.

DISCUSSION

This study aimed to investigate Indonesian senior high school students' use of self-regulated writing (SRW) strategies in composing analytical text and to examine whether gender differences exist in such strategy use. The findings revealed that students employed SRW strategies at a high level overall, with no statistically significant differences across gender. In addition, variations were observed across the four SRW dimensions, with social-behavioral strategies emerging as the most frequently utilized and metacognitive strategies are the least preferred, although all dimensions remained within the high-use category.

The high overall use of SRW strategies suggests that the participants were generally aware of the need to regulate different aspects the writing process when composing analytical exposition texts. This finding demonstrated that a high level of SRW strategy use among high school learners aligns with the studies of Bai and Guo (2021), Sari et al. (2023), and Umamah et al. (2022), which reported that learners actively engage in regulating their writing process.

However, rather than merely reflecting learners' awareness of SRW strategies, the finding may also indicate the nature of the writing task itself. Analytical exposition writing requires students to state claims, organize arguments, evaluating evidence, and maintain logical coherence throughout the text (Anderson, 2002). These demands correspond closely to the cognitive, metacognitive, motivational, and social dimensions of SRW, as learners must not only develop arguments but also monitor the quality of their reasoning, sustain motivation, and seek support when needed. Consequently, students may need to engage in various self-regulatory strategies to accomplish the task successfully.

The relatively high level of SRW use may also be interpreted in relation to educational practices in Indonesia. Under the Merdeka Curriculum, greater emphasis is placed on learner autonomy, active participation, and reflective learning (**Hutabarat et al., 2025**). Although the present study did not directly examine instructional practices within the setting, the findings may indicate that learners had a prior learning experiences that deals with strategy utilization throughout the writing process. As suggested by Teng (2016), Woodrow (2011), and Zhang et al., (2016), students who are more frequently exposed to strategy-based instruction are more likely to develop greater awareness and effective use of SRW strategies.

Across the four SRW dimensions, namely cognitive, metacognitive, social-behavioral, and motivational-regulation, participants reported using social-behavioral the most frequently. More specifically, receiving teacher feedback and revising writing based on feedback emerged as the most highly utilized strategies. This tendency indicates that students perceive feedback as an essential resource in improving their writing. While prior research also highlighted EFL students' reliance on external support, such as teacher feedback, as greatly used strategies (Sari et al., 2023; Tran, 2021; Umamah et al., 2022; Umamah & Cahyono, 2020; Zhang et al., 2026), the present finding may be understood more deeply through the Indonesian educational context.

Indonesian classrooms have traditionally been characterized by relatively strong teacher authority and teacher-centered instructional practices (Bjork, 2005). Within such environments, teachers' feedback is often seen as a credible source of guidance and academic validation. Consequently, students may develop a tendency to rely on teacher feedback when evaluating and revising their writing. In addition, Indonesian society is generally characterized as collectivist, where learning is frequently perceived as a socially mediated process rather than an entirely individual activity. Such sociocultural characteristics may contribute to learners' preference to seek help form external sources when accomplishing writing tasks. Therefore, the preferred social-behavioral strategies in the present study may reflect not only individual learning preferences but also broader sociocultural and educational influences that shape how students regulate their writing.

Nevertheless, this finding should not be interpreted as evidence that students lack independent learning abilities. Rather, it may suggest that the students perceive feedback and external support as part of valuable components of their writing development. Since SRW theory promotes the importance of environmental resources in self-regulation (Zimmerman, 2000), seeking assistance from teachers and peers can be considered as an adaptive form rather than a deficiency. The dominance of feedback-related strategies may

then suggest opportunities for educators to further strengthen students' independent regulatory skills in both learning and completing their assignments.

On the contrary, metacognitive strategies emerged as the least often utilized, although still within the high category. It reflects that planning, monitoring, and evaluating writing may be more challenging than seeking feedback or regulating motivation, suggesting that these processes were not internalized yet within the writing activities. This finding supports a prior study by Zhang et al., (2016) that demonstrated relatively lower use of metacognitive strategies among EFL learners. Unlike cognitive strategies that focus on immediate task completion, metacognitive strategies require learners to establish goals, monitor progress, and evaluate performance throughout the writing process. These processes reflect higher-order regulatory functions that may not develop automatically without explicit instructional support. The finding that reading related articles was among the least frequently employed strategies further reflects that students may devote less attention to prior writing activities such as planning.

Another possible explanation can be linked to the second least chosen dimension by students, namely motivational-regulation. As proposed by Teng and Zhang (2016), metacognitive and motivational dimensions are closely interconnected. It reflects the essential role of metacognition in the SRL process (Winne and Hadwin, 2010), suggesting that students' ability to plan and monitor their learning is influenced by their motivation to engage in the task. This is further confirmed by Shen and Bai (2022), who revealed that motivation-regulation dimension not only directly affects students' writing, but also facilitates the use of other SRW strategies.

However, although motivational-regulation strategies were reported at a relatively high level in the present study, metacognitive strategies remained the least often utilized dimension. This pattern may suggest that students were generally able to maintain their motivation and engagement during writing but were less accustomed to employing higher-order regulatory processes such as planning, monitoring, and self-evaluation. Consequently, the findings showed that sustaining motivation alone may not automatically lead to the frequent use of metacognitive strategies. Rather, the effective utilization of metacognitive strategies may require pedagogical intervention, particularly through instructional practices that explicitly promote planning, self-monitoring, and evaluation during writing.

In terms of gender, this study found that there is insignificant difference of SRW strategies usage across gender. Furthermore, the observed mean difference between male and female students was relatively small, suggesting limited practical significance. This result is in line with previous studies (Dinsa, 2023; Umamah et al., 2022; Zhang et al., 2026), suggesting that both male and female students generally utilized four dimensions of SRW strategies regardless of gender. It reinforces the view that self-regulation is strongly influenced by contextual and environmental factors rather than by gender alone.

From a socio-cognitive perspective, self-regulation develops through interactions among personal, behavioral, and environmental factors (Bandura, 1986). Since male and female learners in the present study were drawn from the same educational context, received similar instruction, and completed the same writing tasks, they were likely exposed to comparable opportunities for developing SRW strategies. Consequently,

contextual factors may become a stronger influence on SRW development rather than gender-related differences. This interpretation is also consistent with Hadwin et al. (2017), who emphasizes that self-regulation is context-dependent and socially situated.

Although the overall differences were not statistically significant, female students reported slightly higher levels of SRW strategy use than male students. This pattern has been repeatedly confirmed in previous research (Dinsa, 2023; Teng & Huang, 2018; Woo & Kim, 2024; Yuliani & Fadhly, 2020). At the same time, contrasting findings have also been reported, with some studies indicating higher strategy use among male students (Umamah et al., 2022; **Zhang** et al., 2026). These inconsistencies reinforce the argument that gender differences in SRW strategies are not universal but rather influenced by contextual and educational factors.

Further analysis of SRW dimensions across gender revealed slight differences in strategy preferences. Social-behavioral strategies appeared as the most often used strategy by male students, indicating a preference for external support such as feedback and peer interaction. This finding is consistent with earlier research suggesting that some learners, aside the specific gender, rely more on collaborative learning environments to support their writing process (Umamah et al., 2022; Umamah & Cahyono, 2020). On the other hand, female students demonstrate a higher tendency to employ motivational-regulation strategies, reflecting stronger internal control over their learning through self-talk, emotional control, and interest enhancement. While these patterns may suggest subtle differences in how learners approach writing task, the absence of significant statistical differences indicate that such variations should not be overstated. Instead, the findings reflect that both male and female students utilized a relatively similar SRW strategies when composing analytical exposition texts.

Taken together, the findings highlight the importance of viewing SRW as multidimensional and context-sensitive construct. The prominence of social-behavioral strategies and the comparatively lower use of metacognitive strategies suggest that students regulate their writing through a combination of external support and self-directed processes, although the balance between these dimensions may vary depends on instructional and sociocultural contexts. Therefore, rather than emphasizing gender differences, greater attention should be directed toward supporting balanced development across all SRW dimensions, particularly in enhancing students' metacognitive awareness and independence in writing.

CONCLUSION

This study investigated Indonesian senior high school students' use of self-regulated writing (SRW) strategies in composing analytical exposition texts and explored whether gender differences existed in the use of such strategies. The findings revealed that students generally demonstrate SRW strategies across multiple dimensions at a high level, reflecting their active engagement in managing the writing process and indicating that self-regulation has become an important component of writing development even at the secondary school level. However, the unequal prominence of SRW dimensions demonstrates that students do not regulate writing in a balanced manner. While external support through feedback and social interaction plays a central role in students' writing regulation, reflective process such as planning, monitoring, and evaluation appeared to be least chosen by the learners.

These findings highlight the importance of understanding SRW as a context-sensitive construct shaped not only by individual characteristics but also by the sociocultural and instructional contexts in which writing occurs. The prominence of social-behavioral strategies may reflect how classroom practices and learning cultures value interaction, guidance, and feedback as part of the writing process. At the same time, the relatively lower use of metacognitive strategies suggests the need for more explicit support in helping students develop higher-order regulatory abilities that enable them to become more independent writers.

The insignificant gender differences in the present study further reflects that students' writing regulation may be influenced more strongly by shared educational experiences than by gender itself. This finding contributes to ongoing discussions regarding gender and self-regulated learning by indicating that gender-based variations in SRW are not universal and should be interpreted within specific educational and sociocultural contexts.

These findings contribute to the literature by providing empirical evidence from the underexplored context of Indonesian senior high school and by focusing on gender as a certain variable and a specific genre, namely analytical exposition text considered as a cognitively demanding task. Further, it provides evidence that contextual and instructional factors may act a more influential role than gender in shaping students' use of SRW strategies. Pedagogically, the results suggest the need to strengthen and integrate metacognitive strategy instruction into writing classrooms to foster greater learner autonomy in writing and promote a more balanced development of SRW dimensions.

Nevertheless, this study is limited by its relatively limited small and imbalance number of participants, context-specific sample, and reliance on self-reported data, which may limit generalizability. Therefore, future research is recommended to involve more diverse participants, adopt mixed-method approaches, examine contextual variables and other writing contexts to provide a more comprehensive understanding of SRW strategy use across different learning environments.

REFERENCES

- Abadikhah, S., Aliyan, Z., & Talebi, S. H. (2018). EFL students' attitudes towards self-regulated learning strategies in academic writing. *Issues in Educational Research*, 28(1), 1–17. <https://www.iier.org.au/iier28/abadikhah.pdf>
- Ahmed, S. A. M. (2023). Using some self-regulatory writing strategies for developing writing skills and reducing writing anxiety among faculty of education EFL majors. *Sohag University International Journal of Educational Research (SUIJER)*, 8(8), 93-133. <https://doi.org/10.21608/suijer.2023.305855>
- Anderson, M. (2002). *Keys to successful writing: Unlocking the writer within (2nd edition)*. Addison Wesley Longman.
- Anderson, M., & Anderson, K. (1997). *Text type in English – Volume 2*. Sydney: Macmillan Education Australia.
- Bai, B., & Guo, W. (2021). Motivation and self-regulated strategy use: Relationships to Primary School students' English writing in Hongkong. *Language Teaching Research*, 25(3), 378–399. <https://doi.org/10.1177/1362168819859921>

- Björk, C. (2005). *Indonesian Education: Teachers, Schools, and Central Bureaucracy*. <http://www.loc.gov/catdir/toc/ecip059/2005005708.html>
- Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, 106(4), 676–713. <https://doi.org/10.1037/0033-295x.106.4.676>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Cer, E. (2019). The instruction of writing strategies: The effect of the metacognitive strategy on the writing skills of pupils in Secondary Education. *SAGE Open*, 9(2). <https://doi.org/10.1177/2158244019842681>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE.
- Dinsa, M. T. (2023). EFL students' writing strategies use in Ethiopia: Gender and year level. *Cogent Education*, 10(2). <https://doi.org/10.1080/2331186x.2023.2256207>
- Eisenberg, N, Martin, C. L., & Fabes, R. A. 1996. *Gender development and gender effects*. In D.C. Berliner & R. C. Calfee (Eds.), *Handbook of Educational Psychology* (pp. 358-396). New York: Simon & Schuster Macmillan
- Fan, C. Y., & Chen, G. D. (2019). A scaffolding tool to assist learners in argumentative writing. *Computer Assisted Language Learning*, 34(12), 159–183. <https://doi.org/10.1080/09588221.2019.1660685>
- Flynn, B. B., Sakakibara, S., Schroeder, R. G., Bates, K. A., & Flynn, E. J. (1990). Empirical research methods in operations management. *Journal of Operations Management*, 9(2), 250–284. [https://doi.org/10.1016/0272-6963\(90\)90098-X](https://doi.org/10.1016/0272-6963(90)90098-X)
- Forbes, K. (2019). The role of individual differences in the development and transfer of writing strategies between foreign and first language classrooms. *Research Papers in Education*, 34(4), 445-464. <https://doi.org/10.1080/02671522.2018.1452963>
- Graham, S. (2007). Learner strategies and self-efficacy: Making the connection. *Language Learning Journal*, 35(1), 81–93
- Hadwin, A., Järvelä, S., & Miller, M. (2017). *Self-regulation, co-regulation and shared regulation in collaborative learning environments*. In *Handbook of self-regulation of learning and performance* (pp. 83–106). Routledge. <https://doi.org/10.4324/9780203839010>
- Hutabarat, K. H., Luhukay, M. Z., A, Z. R. P., & Iskandar, S. (2025). Analisis konsep kurikulum merdeka dalam pendidikan di Indonesia. *Pedagogik Jurnal Pendidikan Guru Sekolah Dasar*, 13(2), 304–310. <https://doi.org/10.33558/pedagogik.v13i2.11071>
- Irawati, D., Lubis, E., & Anisa, S. A. J. N. (2022). Writing anxiety in English as a foreign language and how to improve the writing skill. *Journal of Learning and Instructional Studies*, 2(1), 1627. <https://doi.org/10.46637/jlis.v2i1.22>
- Kartika, H. D. (2015). A learner's self-regulated learning in writing. *IJEE (Indonesian Journal of English Education)*, 2(2), 120-131. <https://doi.org/10.15408/ijee.v2i2.3085>

- Kaluge, T. A., & Halimi, S. S. (2024). Gender, interests, and writing strategies for English students at Private High Schools in Malang. *TEFLIN Journal - a Publication on the Teaching and Learning of English*, 35(1), 19–39. <https://doi.org/10.15639/teflinjournal.v35i1/19-39>
- Kemendikbud. (2016). Silabus mata pelajaran Sekolah Menengah Atas/Madrasah Menengah Aliyah/Sekolah Kejuruan/Madrasah Kejuruan (SMA/MA/SMK/MAK). Jakarta.
- Kesuma, A. T., Retnawati, H., & Putranta, H. (2021). Analysis of self-regulated learning skills in Senior High School students: A phenomenological study. *TEM Journal*, 1285–1293. <https://doi.org/10.18421/tem103-35>
- Kineş, M. (2021). Language learning strategies used in EFL classes and role of gender in High School context. *Bingöl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 22, 199–214. <https://doi.org/10.29029/busbed.928439>
- MacFarland, T. W. (2013). *Introduction to data analysis and graphical presentation in biostatistics with R: Statistics in the large*. <https://doi.org/10.1007/978-3-319-02532-2>
- Martin, J. R., & Rose, D. (2008). *Genre relations: Mapping culture*. London: Enquinox.
- Malpique, A., Simão, A. M. V. V., & Frison, L. M. B. (2017). Self-regulated strategies for school writing tasks: A cross-cultural report. *Psychology of Language and Communication*, 21(1), 244–265. <https://doi.org/10.1515/plc-2017-0012>
- Nadia, K. & Abdelghanie, E. (2024). Impact of gender and language learning in educational settings. *International Journal of Language and Literary Studies*. 6(3).321-328. <http://doi.org/10.36892/ijlls.v6i3.1828>
- Nugent, Annita, Lodge, Jason, Carroll, Annemaree, Bagraith, Rupert, MacMahon, Stephanie, Matthews, Kelly E., and Sah, Pankaj (2018). *Higher education learning framework: an evidence informed model for university learning*. Brisbane, Australia: The University of Queensland. <https://doi.org/10.14264/348c85>
- Odoh, M., & Chinedum, I. E. (2014). Research designs, survey, and case study. *Journal of VLSI and Signal Processing*, 4(6), 16–22. <https://doi.org/10.9790/420004611622>
- Oxford, R. L., & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning (SILL). *System*, 23(1), 1–23.
- Pintrich, P. R., Smith, D. A., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ)*. Ann Arbor, MI: The University of Michigan Press.
- Rasinger, S. M. (2008). *Quantitative research in linguistics: An introduction (2nd ed.)*. Bloomsbury.
- Roderick, R. (2019). Self-regulation and rhetorical problem solving: How graduate students adapt to an unfamiliar writing project. *Written Communication*, 36(3), 410. <https://doi.org/10.1177/0741088319843511>

- Russell, J. M., Baik, C., Ryan, A. T., & Molloy, E. (2020). Fostering self-regulated learning in higher education: Making self-regulation visible. *Active Learning in Higher Education*, 23(2), 97–113. <https://doi.org/10.1177/1469787420982378>
- Sari, R. N., Umamah, A., Anggraini, M. P., Arianto, M. A., Kurniasih, K., & Mukminatien, N. (2023). Exploring self-regulated writing strategies: A comparison between paragraphs and essays. *Studies in English Language and Education*, 10(2), 805–821. <https://doi.org/10.24815/siele.v10i2.26146>
- Sartika, D., Fitriati, S. W., Suwandi., & Pratama, H. (2023). *Students' issues with writing analytical exposition text in vocational school*. In Proceedings of the International Conference on Science, Education and Technology (pp. 185–190). UNNES. <https://proceeding.unnes.ac.id/index.php/iset>
- Schraw, G. A. (1998). *Promoting general metacognitive awareness*. *Instr. Sci.* 26, 113–125. doi: 10.1023/A:1003044231033
- Shen, B., & Bai, B. (2022). Chinese university students' self-regulated writing strategy use and EFL writing performance: Influences of self-efficacy, gender, and major. *Applied Linguistics Review*, 15(1), 161–188. <https://doi.org/10.1515/applirev-2020-0103>
- Soliman, C., & Gorospe, J. D. (2024). Learner autonomy, language learning strategies and English language proficiency of Filipino Senior High School students. *International Journal of Language and Literary Studies*, 6(2), 330–359. <https://doi.org/10.36892/ijlls.v6i2.1645>
- Teng, L. S. (2016). *Fostering strategic second-language writers: A study of Chinese English-as-a Foreign-Language (EFL) writers' self-regulated learning strategies, self-efficacy and motivational beliefs* (Unpublished Doctoral Dissertation). The University of Auckland, New Zealand.
- Teng, F., & Huang, J. (2018). Predictive effects of writing strategies for self-regulated learning on Secondary School learners' EFL writing proficiency. *TESOL Quarterly*, 53(1), 232–247. <https://doi.org/10.1002/tesq.462>
- Teng, L. S., & Zhang, L. J. (2016). A questionnaire-based validation of multidimensional models of self-regulated learning strategies. *Modern Language Journal*, 100(3), 674–701. <https://doi.org/10.1111/modl.12339>
- Tran, T. T. M. (2021). Use of self-regulated learning strategies in paragraph writing at Van Lang University. *International Journal of TESOL & Education*, 1(3), 1–13. <https://i-jte.org/index.php/journal/article/view/80>
- Umamah, A. & Cahyono, B. Y. (2020). Indonesian University students' self-regulated writing (SRW) strategies in writing expository essays. *Indonesian Journal of Applied Linguistics*, 10(1), 25-35. <https://doi.org/10.17509/ijal.v10i1.24958>
- Umamah A., El Khoiri N., Widiati U., & Nunuk Wulyani A. (2022). EFL University students' self-regulated writing strategies: The role of gender, interest, and proficiency. *Journal of Language and Education*, 8(4), 182-193. <https://doi.org/10.17323/jle.2022.13339>

- Winne, P. H., & Hadwin, A. F. (2010). *Self-regulated learning and socio-cognitive theory*. In P. Pene lope, B. Eva, & B. McGaw (Eds.), *International encyclopedia of education* (pp. 503–508). Oxford, UK: Elsevier
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510–522.
- Wolters, C. A. (1999). The relation between high school students' motivational regulation and their use of learning strategies, effort, and classroom performance. *Learning & Individual Differences*, 11, 281–299.
- Woo, E., & Kim, D. (2024). Measuring secondary school students' L2 writing self-regulated strategies in the Korean EFL context. *International Journal of Applied Linguistics*, 34(3), 1074–1088. <https://doi.org/10.1111/ijal.12551>
- Zhang, W., Alias, A., & Jamaludin, K. A. (2026). Self-regulated learning writing strategies among Chinese English-major undergraduates: Gender, proficiency, academic year, and interrelations. *International Journal of Learning Teaching and Educational Research*, 25(3), 988–1010. <https://doi.org/10.26803/ijlter.25.3.44>
- Zhang, L. J., Aryadoust, V., & Zhang, D. (2016). *Taking stock of the effects of strategies-based instruction on writing in Chinese and English in Singapore Primary Schools*. In R. E. Silver & W. Bokhorst-Heng (Eds.), *Quadrilingual education in Singapore: Pedagogical innovation in language education* (pp. 193–244). New York, NY: Springer.
- Zimmerman, B. J. (2000). *Attaining self-regulation*. In Elsevier eBooks (pp. 13–39). <https://doi.org/10.1016/b978-012109890-2/50031-7>
- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, 31(4), 845–862. <https://doi.org/10.3102/00028312031004845>
- Zimmerman, B.J., & Risemberg, R. (1997). *Becoming a self-regulated writer: A social cognitive perspective*. *Contemporary Educational Psychology*, 22, 73–101