



Behavioral Analysis of English Writing Process: A Case Study of Vocational Students

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Abstract

One of the challenging English skills for Indonesian vocational high school students is writing, but their writing process is rarely studied. This study examines their writing behavior, particularly self-regulation at each stage. Through a qualitative case study, structured observational data of four students and semi-structured interviews with them and their teacher were thematically analyzed and triangulated. Self-regulation emerged, but it was not evenly distributed across stages, heavily reliant on dictionaries and digital translators, and evident in the perseverance to continue interrupted tasks. Drafting dominates writing time; the imbalance at this stage, which seems to be reinforced by the learning design, is related to writing difficulties. These findings support explicit staged writing instruction.

Keywords: *writing behavior; self-regulation in writing; vocational high school students; EFL writing process; qualitative case study*

Introduction

Writing occupies a paradoxical position in Indonesian secondary English education: it is formally taught and routinely assessed, yet seldom examined as an activity. Assessment tends to concentrate on the finished text, its grammatical accuracy, lexical range, and organization, while the sequence of actions that produced the text remains outside the teacher's view. Two students may submit equally weak paragraphs for different reasons: one never formed a plan, another ran out of linguistic resources mid-sentence, and a third began ten minutes before the deadline. A score cannot distinguish among these cases and therefore cannot indicate what should be taught next.

The stakes are practical in vocational secondary schools (Sekolah Menengah Kejuruan, SMK). Graduates may need written English for reports, job applications, and correspondence, so limited writing ability can constrain opportunity well beyond the classroom. Yet writing in these schools is commonly treated as a product to be corrected rather than a process to be taught, and research on SMK writing reflects the same orientation. According to (Giawa et al., 2024), for example, analyzed the recount texts of 24 Grade X accounting students at a state vocational school, identified 141 grammatical and 9 mechanical errors, and found misformation (48%) to be the dominant error type. Such studies show what goes wrong in the text, but not what students did while producing it.

Two explanations for students' writing difficulty recur in the literature, and each is incomplete on its own. The first is linguistic. As reported by (Fareed et al., 2016), he did traced problems in writing to insufficient command of grammar, syntax, and vocabulary, together with a lack of ideas and reliance on the first language; an Indonesian error analysis of SMK texts points in the same direction, tracing errors to limited vocabulary, weak mastery of tenses and punctuation, and lack of interest in English (Giawa et al., 2024).

The second one is motivational sector. (Limeranto & Mbato, 2022) found a positive aspect, if modest, the relationship between motivation and essay-writing achievement among the students of Indonesian EFL. A related line of classroom intervention introduces media, novel materials, or idea-generation techniques and judges success by gains in writing scores. YouTube has been used to improve students' writing ability (Hardianti & Saosang, 2022), and a brainwriting strategy raised the mean writing score of Grade X madrasah students in Palu from 55.17 to 68 in a one-group pretest-posttest design (Nurfitri et al., 2025).

These designs answer a real question, but not the one raised here. A gain in scores shows that something changed; it does not show what students did differently while composing. Neither account explains why a student with adequate vocabulary and motivation may still produce a poorly organized text, or why a student with limited vocabulary may nonetheless persist to completion. What is missing is an account of the process that mediates between resources and outcome.

Self-regulated writing research offers such an account. In accordance with (Zimmerman & Risemberg, 1997) that self-regulated writers as managing environmental, behavioral, and covert personal processes, and Zimmerman's cyclical model organizes self-regulation into forethought, performance, and self-reflection phases (Panadero, 2017a). The studies of Indonesian EFL learners have mapped self-regulated writing strategies mainly through questionnaires. The university students rated strategies of social-environment, such as seeking help from peers and learning resources, highest and motive strategies lowest (Sari et al., 2023); (Umamah & Cahyono, 2020).

At the high school grade, validated instrument (questionnaire) with Korean secondary school students showed that self-regulated writing strategy use differed by gender and grade level and significantly influenced writing achievement (Woo

& Kim, 2024), and Indonesian high school students reported that written corrective feedback supported their self-regulated learning (Afreilyanti & Kuswandono, 2024). Internationally, researchers have verified that strategy-based writing instruction strengthens self-regulated writing (Teng & Zhang, 2020), and that reflective journals increase Chinese EFL students' use of several self-regulated writing strategies over one semester (Zhang et al., 2022).

This body of work leaves three gaps that matter for vocational settings. Firstly, the Indonesian evidence rests largely on self-report: questionnaires record what students say they do, not how they distribute effort across phases while writing. Secondly, participants have been mostly university or general senior high school students, while SMK writing research has concentrated on errors in finished texts (Giawa et al., 2024). Thirdly, the dominant explanations locate difficulty in a deficit of language or motivation and leave unexamined how the instructional environment shapes the process. Studies that observe the writing process of SMK students directly, and compare that record with the students' own accounts, remain scarce.

Zimmerman's model is useful here for a specific reason: it renders the writing process partly observable. Goal setting, drafting order, dictionary consultation, translation from the first language, peer consultation, and revision are actions that can be recorded and reported even when the mental operations behind them cannot be observed directly. This study examines two dimensions of self-regulated writing. The cognitive dimension covers planning, problem solving, self-monitoring, and evaluation; the behavioral dimension covers action and persistence, independent practice, and time management. Motivational and affective factors lie outside its scope.

The setting intensifies the conditions under which these processes operate. SMK SPP Muhammadiyah Siney is an agricultural vocational school in Siney Village, South Tinombo District, Parigi Moutong Regency, Central Sulawesi. Its students have limited exposure to written English outside the classroom and limited access to learning resources. Preliminary observation and the English teacher's account indicated that many Grade XI students struggled to compose even short texts in the genres prescribed by the curriculum. Notably, the difficulty lay not only in the language of the texts but also in how students organized the work itself.

This study therefore examines the English writing process of Grade XI students at this school and addresses one question: What behavioral strategies do students use to plan, manage, and carry out the process of writing English texts? Behavioral strategies here denote what students observably do or report doing, and so span both dimensions. The novelty of the study lies in combining structured observation with student and teacher interviews in a rural agricultural SMK, a setting absent from the questionnaire-based studies reviewed above. Its contribution is twofold.

Substantively, it extends self-regulated writing research to rural vocational education and advances an environmental rather than a deficit reading of students' dependence on external support. Methodologically, it records a divergence between observed and self-reported planning and treats that divergence as evidence about the writing process rather than as measurement error.

Method

Design

This study adopted a qualitative case study design (Creswell, 2012). The case was the English writing process of Grade XI students at SMK SPP Muhammadiyah Siney, examined through the cognitive and behavioral dimensions of self-regulated writing. A case study suited the aim because the process could be understood only within its instructional setting, and because the question concerned how students write rather than how well they write.

Participants and Setting

Four Grade XI students (S1–S4) were selected purposively on the English teacher's recommendation. The criteria were that students had received instruction in writing English texts under the current curriculum, took an active part in writing activities, and were willing to participate. The English teacher of the class served as a supporting informant.

Data Sources

Three sources were used. Structured observation of one English writing session employed a checklist of 15 behavioral indicators across three stages of composing: pre-writing (three indicators), while-writing (seven), and post-writing (five). Each indicator was recorded as present or absent for the observed session and supported by field notes. Semi-structured interviews with the four students covered 12 items: six on the cognitive dimension (planning, problem solving, self-monitoring, and evaluation) and six on the behavioral dimension (action, persistence, writing practice, and time management).

A semi-structured interview with the teacher covered ten items on students' writing ability, planning, problem solving, monitoring, evaluation, persistence, time management, and her own instructional strategies; it was audio-recorded and lasted about 17 minutes. Because the checklist records observable action, it corresponds most directly to the research question, while the interviews add students' own accounts and the instructional context.

Data Analysis

Data were analyzed with the interactive model of (Miles et al., 2014), proceeding through data condensation, data display, and conclusion drawing with verification. Interview transcripts were coded first by dimension and then by sub-construct (for example, planning, help seeking, persistence, and time allocation),

and the resulting categories were mapped onto the forethought, performance, and self-reflection phases. Observation records were tabulated by stage (Table 1), and student accounts were displayed in a participant-by-aspect matrix (Table 2). Teacher data were treated as contextual: they describe the environment in which students wrote rather than the students' own strategies. Motivational statements that appeared in the data were reported as context only, consistent with the scope of the study.

Trustworthiness and Ethics

Credibility was pursued through triangulation of source and technique. The observation record, the student interviews, and the teacher interview were compared against one another, and points of divergence were recorded rather than resolved by preference; the main divergence is reported as a finding. Permission was obtained from the study program and the school principal, participation was voluntary, and students are identified by code (S1–S4).

Results and Discussion

Results

Observed Writing Behaviors across Stages

Eleven of the 15 indicators were recorded as present during the observed session (Table 1). Their distribution across stages was uneven: all three pre-writing indicators were present, six of the seven while-writing indicators were present, and only two of the five post-writing indicators were present.

Table 1. Distribution of Observed Writing Behaviors across Three Stages

Stage	No.	Indicator	Result
Pre-writing	1	Reads and understands the writing task before starting	Present
	2	Brainstorms ideas before writing	Present
	3	Makes an outline or plan before writing	Present
While-writing	4	Starts writing without significant delay	Absent
	5	Refers to notes, dictionaries, or other resources	Present
	6	Pauses to think before continuing to write	Present
	7	Revises sentences while writing	Present
	8	Crosses out or rewrites words or sentences	Present
	9	Asks the teacher or peers for assistance	Present
	10	Remains focused on the writing task	Present
Post-writing	11	Rereads the completed text	Present
	12	Corrects grammatical errors	Absent
	13	Corrects spelling and punctuation errors	Absent
	14	Adds new information during revision	Present
	15	Submits the final version after revision	Absent

In the pre-writing stage, students read the task, brainstormed ideas, and produced an outline or plan before writing. In the while-writing stage, the only absent indicator was starting without significant delay: a noticeable pause preceded the onset of writing. Students consulted notes, dictionaries, or other resources, paused to think, revised sentences in progress, crossed out and rewrote text, asked the teacher or peers for help, and remained on task. In the post-writing stage, students reread the completed text and added new information, but no correction of grammar, spelling, or punctuation was observed, and no final version was submitted after revision.

Students' Reported Strategies

Table 2. Reported Behavioral Strategies by Participant

Aspect	S1	S2	S3	S4
Action sequence	Takes notes, asks word meanings, arranges sentences	Asks the teacher	Reads the prompt, then writes	Searches word meanings, then writes
Persistence	Pauses, then resumes	Pauses, then resumes	Rests briefly, then resumes	Asks a friend, then continues
Stated reason for continuing (context only)	Obligation	Patience	Grades	Finishing quickly
Independent practice	Sometimes	Rarely	Rarely	Sometimes
Time management	Starts early	Works at night (ambiguous)	Works close to the deadline	Starts early
Time allocation	Drafting-dominant	Drafting-dominant	Drafting-dominant	Equal split (claimed)

All four students described short, vocabulary-first action sequences (Table 2). S1 took notes, asked for word meanings, and then arranged sentences; S4 searched for meanings and then wrote; S3 read the prompt and wrote; and S2 asked the teacher. Persistence was the most consistent pattern. When bored or stuck, every student described a brief pause followed by resumption, and none reported abandoning the task. This account was volunteered in response to an open question rather than elicited by a leading one. Asked what kept them going, students cited obligation, patience, grades, and a wish to finish quickly; none offered an intrinsic reason.

Independent practice outside class assignments was low. Two students wrote in English sometimes and two rarely, one noting only incidental exposure through a mobile phone. Time management varied: S1 and S4 started early, explaining this as a way to understand the task better and avoid a rushed finish; S3 worked close

to the deadline; and S2 gave an ambiguous answer. Three of the four students gave drafting most of their time, treating planning as brief and checking as a short final step, while S4 claimed an equal division.

The Teacher's Account

The teacher rated the students' average writing ability as low and described writing in English as considerably harder for them than writing in Indonesian. Her account of instruction was the most elaborated part of the interview. She assigned the topic, typically biographies of well-known figures; instructed students to brainstorm; directed them to search for references; and introduced the text structure before composing.

During drafting, students wrote their ideas in Indonesian first and then rendered them into English, using dictionaries, mobile phones, and online translation tools at her direction. She allotted about 30 minutes to each stage, monitored the clock, and checked students' grammar, contextual accuracy, and machine-translation output. These statements describe the teacher's actions and therefore contextualize, rather than directly answer, the research question.

Observed and Reported Planning

The observation and the interviews diverged on the forethought phase. All three pre-writing indicators, including producing an outline, were recorded as present. Yet none of the four students reported preparing a written outline; they described preparation as thinking about ideas, reading a relevant text, or consulting an example.

Convergence and Divergence across Sources

Table 3 sets the three sources side by side. They converged on resource use, help seeking, and the delegation of editing to the teacher. They diverged on planning, and partly on time allocation: the teacher reported allotting about 30 minutes to each stage, whereas three of the four students described drafting as taking most of their time.

Table 3. Convergence and Divergence across Data Sources

Aspect	Observation	Student Interviews	Teacher Interview	Pattern
Planning	All three pre-writing indicators present, including an outline	No written outline; thinking, reading, or consulting examples	Prescribes brainstorming, reference search, and text structure	Divergent
Resource use and help seeking	Resources consulted; teacher and peers asked	Word meanings asked or searched; teacher or friend	Directs use of dictionaries, phones, and online	Convergent

		asked	translators	
Time allocation	Delayed start of writing	Drafting-dominant (three of four)	About 30 minutes allotted to each stage	Partly divergent
Revision and editing	Rereading and added content; no grammar or mechanics correction; no final version	Checking described as a short final step	Teacher checks grammar, context, and translation output	Convergent

Discussion

Forethought Enacted Informally

The divergence between observed and reported planning is better read as a difference in what each method captures than as measurement error. Observation records visible behavior; interviews record how students understand and name their own strategies. Behaviors an observer classified as planning, such as pausing to think, jotting brief notes, or rereading the task, may not have counted as producing an outline for the students themselves. From their perspective, planning was a mental activity or an act of consulting a model, not the creation of a written plan. The two sources describe different facets of the same process, and the value of triangulation lies in exposing that difference rather than resolving it.

Two alternative explanations warrant acknowledgment. One is reactivity: students knew they were being observed, and this awareness may have elicited more visible pre-writing behavior than usual. The other is definitional mismatch: outline may have carried a narrower meaning for the students than for the researcher. What survives all three readings is that forethought was enacted, but informally rather than strategically. In Zimmerman's model, forethought comprises task analysis, goal setting, and strategic planning (Panadero, 2017b); what these students did was mental rehearsal and imitation of models. The delayed start recorded in Table 1 is open to the same double reading. Given the students' accounts of mental rehearsal, the pause may partly reflect informal forethought; given their vocabulary-first sequences, it may equally reflect a search for words before the first sentence could be written.

This finding contrasts with proficient Indonesian university writers, who emphasized method strategies when planning (Umamah & Cahyono, 2020). It also carries a methodological caution for the literature. Studies of self-regulated writing rely chiefly on questionnaires, whether with Indonesian university students (Sari et al., 2023); (Umamah & Cahyono, 2020) or with Korean secondary school students (Woo & Kim, 2024). In validating such a questionnaire, (Woo & Kim, 2024) found that some items needed revision to measure strategies in a culturally sensitive way, a reminder that self-report depends on how students understand the

labels for their strategies.

In the present case, self-report described planning differently from observation, so strategy frequencies drawn from self-report alone may misstate how planning is enacted in class. Combining the two methods makes that gap visible rather than hiding it inside an average.

Self-Regulation That Is Present but Externally Scaffolded

Taken together, the three sources describe self-regulation that is real but externally supported at nearly every point. Help seeking was the default response to lexical difficulty, to syntactic difficulty, and in one case to loss of momentum. Dictionaries, mobile phones, and online translation tools mediated the production of text throughout. Ideas depended on external models rather than on independent retrieval, and evaluation, where it occurred, was often delegated to the teacher or a peer.

This result confirms, in a vocational school and through observation, a pattern that Indonesian questionnaire studies have reported. Social-environment strategies, such as seeking help from peers and learning resources, were rated highest among Indonesian university writers (Sari et al., 2023); (Umamah & Cahyono, 2020). The present data extend this pattern to vocational secondary students and add how the reliance unfolds: it is concentrated in the performance phase and organized around word meaning.

Reliance on translation is likewise consistent with earlier reports. (Fareed et al., 2016) identified reliance on the first language as a source of writing problems, and Indonesian university students acknowledged heavy dependence on Google Translate, which helped their vocabulary but not their grammar (Ariyanto & Setiamunadi, 2023). A replication study in China likewise found that machine translation improved learners' writing specifically in lexical expression (Yang et al., 2023). The absence of grammatical and mechanical correction in Table 1 fits this profile: the tools these students relied on appear to resolve words more readily than they build editing habits.

The setting sharpens this dependence. Independent practice was low, two students reporting that they wrote in English only sometimes and two rarely, and one student's exposure to English came only incidentally through a mobile phone. In a rural school with limited access to learning resources, the phone is both dictionary and translator, and the classroom is the main occasion for writing at all. Self-regulation outside class therefore has few occasions to develop, which helps explain why the regulation observed was tied so closely to the resources available during the lesson.

This pattern invites a deficit reading in which students are characterized as insufficiently autonomous. The data support a more careful interpretation. Accordance with (Zimmerman & Risemberg, 1997) that the environment among the domains a writer regulates, and Zimmerman's cyclical model treats help seeking, environmental structuring, and time management as self-control

strategies of the performance phase (Panadero, 2017b). Choosing a dictionary or asking a tutor can thus be a self-regulatory act rather than evidence of its absence.

Moreover, the teacher's account describes an instructional design that supplies the topic, prescribes brainstorming, directs students to references, provides the text structure, sanctions translation from Indonesian, allocates fixed time blocks, and corrects the finished product. Under such a design, external dependence is not simply a student trait; it is in substantial part a rational response to the environment in which writing is performed. A student whose text will be corrected by the teacher has limited incentive to develop independent evaluative criteria, and a student whose planning is prescribed has limited occasion to construct a plan.

This reading needs one qualification. Indonesian high school students have reported that written corrective feedback, especially direct feedback, supported their self-regulated learning (Afreilyanti & Kuswando, 2024). The two findings need not conflict. Feedback can support self-regulation when students act on it, and it can substitute for self-regulation when the teacher's correction ends the task, as the absence of a revised final version suggests happened here.

If writing tasks are habitually completed in a single sitting and assessed chiefly on accuracy after submission, revision brings little return, and the truncation of the self-reflection phase becomes intelligible as adaptation rather than as a failure of will. The evidence does not permit a definitive choice between the trait explanation and the environmental explanation, and the study does not claim one. It establishes that the environmental explanation is consistent with the data and must be tested rather than assumed away.

Phase Imbalance as the Locus of Difficulty

The most consistent finding across the three sources is not weakness in any single capacity but imbalance across phases. The performance phase is overextended: students allocate most of their time to drafting, monitor continuously if superficially, consult resources persistently, and sustain effort by pausing and resuming. Forethought is compressed into brief mental rehearsal. Self-reflection appears in rereading but does not culminate in linguistic editing or a finalized text. The partial divergence on time allocation in Table 3 points the same way: even where the teacher allots equal time to each stage, students report that drafting absorbs most of it.

This finding partly corrects the two explanations reviewed in the Introduction. Linguistic limitations are real: the teacher rated the students' ability as low, and an error analysis of SMK texts documents frequent misformation (Giawa et al., 2024). Yet the students' vocabulary-first sequences show them spending their effort on precisely those limitations, while the phases that could organize and check the text received little time. The motivational account fits less well. Motivation has been linked to writing achievement (Limeranto & Mbato, 2022), but effort was not the scarce resource here: all four students persisted, and

none abandoned the task. Interventions that raise interest through media (Hardianti & Saosang, 2022) may therefore improve scores without changing how the phases are distributed, a possibility that process-based evaluation could test.

The pedagogical implication follows from the shape of the imbalance rather than from a general call for more instruction. Adding writing time is unlikely to help, because time already flows to drafting. What is absent is a reason and a procedure for the phases that surround drafting. Instruction that separates planning and evaluation into distinct, assessed, and repeated activities addresses that gap directly. Prior work supports this direction. Strategy-based writing instruction has been examined as a means of strengthening EFL learners' self-regulated writing (Teng & Zhang, 2020).

Reflective journals were followed by significant increases in several strategies over a semester, and strategies such as idea planning and resource management distinguished high- from low-proficiency writers (Zhang et al., 2022). Locally, brainwriting, a collaborative idea-generation technique, raised writing scores among Grade X students in Palu (Nurfitri et al., 2025). Because it works on the forethought phase, it is a candidate component for such instruction, provided its effect is traced in the writing process and not only in scores. In vocational classrooms like the one studied, the same logic would mean assessing a written outline before drafting, making self-editing of grammar and mechanics a required step, and requiring a revised final version, so that forethought and self-reflection carry consequences rather than remaining optional.

Conclusion

Grade XI students at SMK SPP Muhammadiyah Siney regulated their English writing, but unevenly and with heavy external support. Their repertoire was concentrated in the performance phase. They prepared mentally and imitated models rather than planning in writing, resolved lexical and syntactic obstacles through teachers, peers, dictionaries, and translation tools, and sustained effort by pausing and resuming. Self-reflection stopped at rereading and adding content, short of linguistic editing and a revised final text.

The study concludes that these students' writing difficulties arise less from insufficient effort, and not only from linguistic limitation, than from an imbalance in how the phases of writing are enacted. That imbalance appears to be reinforced by an instructional design that supplies externally what students might otherwise construct themselves. Self-regulation was present, but scaffolded rather than autonomous. Methodologically, the divergence between observed and reported planning shows that self-report alone can misrepresent how forethought is enacted, a caution for questionnaire-based research on self-regulated writing.

Teachers should teach and assess goal setting, planning, self-monitoring, and self-evaluation as separate steps, so that independent idea generation, written outlining, and reflective revision carry consequences rather than functioning as optional preliminaries to drafting. Researchers should test the environmental

explanation directly, through intervention or longitudinal designs that vary task structure deliberately.

The study involved four students in a single school, so its findings are offered for transferability rather than generalization. Observation covered one session, which cannot establish that the recorded behaviors are typical. Cognitive processes were inferred from self-report and observable action rather than accessed directly; think-aloud or stimulated-recall procedures would provide stronger evidence. Finally, students' written texts were not analyzed, so no claim is made about the relationship between the strategies described and the quality of the texts produced.

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