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BEYOND RULE VIOLATION: A COGNITIVE GRAMMAR ANALYSIS OF TENSE-RELATED ERRORS IN PASSIVE VOICE AMONG INDONESIAN EFL LEARNERS

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Abstract: Passive voice remains one of the most challenging grammatical structures for Indonesian EFL learners, largely due to structural differences between English and Indonesian sentence systems, particularly in tense marking and participant perspective. This study aims to identify the types of errors made by Indonesian EFL students in constructing passive voice sentences and to explain these errors from the perspective of Cognitive Grammar. The study employed a descriptive qualitative design supported by quantitative data. Participants were fifth-semester students of the English Department at STBA JIA Bekasi, selected through purposive sampling. Data were collected through a 20-item passive voice transformation test and analyzed using the Surface Strategy Taxonomy proposed by Dulay, Burt, and Krashen (1982), while learners' conceptualization was interpreted through Langacker's (2008) Cognitive Grammar framework. The findings revealed 224 errors, with misformation as the most frequent category, accounting for 83.9% of all errors and encompassing inappropriate use of tense (37.1%), verb form errors (26.3%), inappropriate use of auxiliary verbs (13.4%), and inappropriate verb use (7.1%). This was followed by omission errors (8.9%, comprising omission of auxiliary verbs and omission of letters) and misordering errors (7.1%). From the Cognitive Grammar perspective, these errors reflect difficulties in temporal grounding, participant profiling, and event construal. The findings suggest that students face challenges not only in applying grammatical rules but also in conceptualizing passive constructions appropriately.
Keywords: *passive voice; error analysis; cognitive grammar; temporal construal; EFL learners*.

INTRODUCTION

English has become a global language central to education, international communication, and science and technology. In Indonesia, English is taught from primary school through higher education to build learners' communicative skills and global competitiveness. Among the components of English proficiency, grammar is particularly important because it supplies the structural framework needed for accurate and meaningful communication (Depraetere & Langford, 2025). Grammatical competence is accordingly regarded as a key element of second language acquisition, supporting learners' ability to use the language appropriately across communicative contexts (Brown & Lee, 2025; Celce-Murcia & Larsen-Freeman, 1999; Ellis & Barkhuizen, 2005; Ionin et al., 2024; Lightbown & Spada, 2021).

One grammatical structure that continues to challenge EFL learners is the passive voice. Passive constructions are widely used in academic writing, scientific reports, and formal communication because they let the writer emphasize the action or the affected object rather than the agent (Celce-Murcia & Larsen-Freeman, 1999; Depraetere & Langford, 2025; Uzmi et al., 2024). Azar and Hagen (2026) define the passive voice as a construction that positions the subject as the recipient, rather than the performer, of an action. Its complexity stems from the need to coordinate tense change, auxiliary verb selection,

and past participle formation simultaneously (Azar & Hagen, 2026; Celce-Murcia & Larsen-Freeman, 1999).

For Indonesian EFL learners, this challenge is compounded by structural differences between Indonesian and English: Indonesian passive formation does not require tense change or auxiliary verbs to mark time, creating potential for negative language transfer (Odlin, 2022). Learners consequently often struggle to select the correct tense, choose appropriate auxiliaries, and determine which participant should function as the grammatical subject. Difficulties of this kind are well documented in second language acquisition research generally (Gass et al., 2025; Ionin et al., 2024) and specifically within the Indonesian context. Mustakim et al. (2025) and Shiddiq et al. (2023) report that passive voice remains one of the hardest structures for Indonesian EFL learners to master; at the level of sentence transformation, Kurniati and Swondo (2024) and Apriyanti and Nurdini (2021) find that errors cluster around tense selection and auxiliary misuse, while Azahra et al. (2025) identify misformation as the dominant error category among university learners, a pattern also reported by Sari and Fikroni (2025) more broadly. Taken together, these studies confirm that misformation errors are widespread across educational levels and test formats — yet most still classify errors through traditional error-analysis frameworks (Ellis & Barkhuizen, 2005; James, 2013) without explaining the cognitive processes behind learners' grammatical choices, leaving a gap this study addresses.

This pattern extends beyond Indonesia. Jannah et al. (2023) found Indonesian university students struggling with tense change, subject–verb agreement, and appropriate use of "by" in passive constructions, while Windasari et al. (2023) reported misformation as the dominant error type (65.45%) among Indonesian high school students — a rate notably lower than the 83.9% found among university-level participants in the present study. Aajami et al. (2023) further demonstrated that a Cognitive Grammar approach improved Iraqi EFL learners' comprehension and correction of present-simple-tense errors, lending direct support to the cognitive orientation adopted here. Even so, existing studies generally describe error forms and frequencies rather than explaining why the same errors persist. Since passive voice formation requires learners to simultaneously determine tense, select an auxiliary, identify participant roles, and adopt a perspective on the event, understanding these errors requires more than identifying their surface form — it requires explaining how learners conceptualize grammatical meaning in the first place (Langacker, 2008, 2017; Mueller, 2026), linking grammatical form to underlying conceptualization processes (Littlemore, 2023; Llopis-García & Piquer-Píriz, 2024).

To address this need, the present study adopts Langacker's (2008, 2017) Cognitive Grammar framework, which treats grammar as inherently meaningful — a symbolic system in which structures represent particular ways of construing events, participants, and temporal relationships, rather than an autonomous system of arbitrary rules (Cai & Zhao, 2024; Lukács et al., 2026; Romain et al., 2024; Perek, 2023). Although Cognitive Grammar is increasingly applied in second language acquisition research (Littlemore, 2023; Liu & Qin, 2024; McManus, 2024), and Aajami et al. (2023) have begun applying it pedagogically to the present simple tense, no study to date has integrated Cognitive Grammar with a formal error-classification system such as the Surface Strategy Taxonomy to explain passive voice errors among Indonesian EFL learners specifically. The cognitive mechanisms underlying tense selection, participant profiling, and event construal in passive constructions therefore remain largely unexplored.

This study addresses that gap by examining passive voice errors among fifth-semester English Literature students at STBA JIA through the lens of Cognitive Grammar, guided by three research questions: RQ1. What types of errors do fifth-semester students make when constructing passive sentences in English? RQ2. What are the most dominant factors causing these errors? RQ3. How can these errors be explained from the perspective of Cognitive Grammar?

Within this framework, the passive voice is understood as a construal operation shifting attention from agent to affected participant, while tense reflects how speakers mentally locate events within particular temporal domains (Cheng, 2023; Marx & Wittenberg, 2025; Ng, 2023). Errors in passive construction may therefore signal not merely insufficient grammatical knowledge but deeper conceptual difficulty in temporal grounding, participant profiling, and event construal (Grishechko & Tomalin, 2025; Marx & Wittenberg, 2025; Putri, 2025; Zhong, 2024).

The novelty of this study lies in integrating the Surface Strategy Taxonomy with Cognitive Grammar. Rather than classifying errors by

linguistic form alone (Ellis & Barkhuizen, 2005; James, 2013), this study also explains the conceptual processes generating them — treating grammatical errors as reflections of how learners construe temporal relationships, participant roles, and event structure (Geraghty et al., 2024; Langacker, 2008, 2017; Zhong, 2024). Where Aajami et al. (2023) used Cognitive Grammar as a 16-session pedagogical intervention targeting the present simple tense specifically, this study instead applies Cognitive Grammar as an explanatory framework integrated with the Surface Strategy Taxonomy, accounting for the cognitive sources of passive voice errors across multiple tense forms rather than designing an intervention around a single one.

Theoretically, this study aims to enrich Cognitive Grammar research within second language acquisition by demonstrating how mechanisms such as temporal grounding, participant profiling, event construal, and symbolic encoding explain passive voice errors among Indonesian EFL learners, while extending error analysis by integrating grammatical classification with concept-based explanation. Practically, the findings are intended to guide university lecturers and school teachers in designing grammar instruction that moves beyond rote rule memorization toward helping learners understand the conceptual basis of passive constructions — improving both conceptual understanding and grammatical accuracy in the process.

METHOD

This study employed a descriptive qualitative design complemented by descriptive quantitative analysis. According to Creswell and Creswell (2023) and Litosseliti (2024), descriptive qualitative research aims to explore and interpret phenomena within their natural context, while descriptive quantitative analysis presents the frequency and percentage of identified patterns, providing a clearer picture of how learners' errors are distributed.

The research was conducted at Sekolah Tinggi Bahasa Asing (STBA) JIA, Bekasi. This institution was selected not only for its accessibility but because its English Department curriculum requires students to complete Structure and Grammar courses covering all English tense forms and passive voice constructions by the end of the fourth semester. Fifth-semester students had therefore already received the complete grammatical instruction necessary to perform passive voice transformation tasks, making them the most appropriate participants for examining post-instruction error patterns rather than difficulties arising from incomplete exposure to the material (Mackey & Gass, 2021; Sugiyono, 2022). Purposive sampling was used to select fifth-semester English Department students from both morning and evening classes, since they had previously studied passive voice constructions and were expected to possess sufficient grammatical knowledge for the study's purposes (Creswell & Creswell, 2023; Sugiyono, 2022).

The research was conducted over six months, encompassing data collection, consultation, and revision. Primary data consisted of students' responses to a passive voice transformation test, while books, journal articles, and other scholarly references served as supporting literature for interpreting the findings. Data were collected offline during regular Academic Writing classes through a 20-item passive voice transformation test, requiring students to convert active sentence prompts into grammatically correct passive constructions across eight tense forms: present simple, present progressive, present perfect, past simple, past progressive, past perfect, future simple, and modal passive.

The research procedure consisted of three main stages. First, learner language samples were collected through the passive voice transformation test administered to fifth-semester students, allowing examination of their tense usage within passive constructions. Second, the collected data were analyzed following the error analysis stages proposed by Ellis and Barkhuizen (2005) and informed by the principles of learner language analysis (James, 2013).

Table 1. *Research methodology overview*

Component	Description	Key Features
Research Design	Descriptive qualitative method	Examines grammatical error patterns in natural context
Data Source	Fifth-semester students' responses to 20 grammar items	Consists solely of students' written responses to the test
Analytical	Langacker's (2008, 2017) Cognitive	Focuses on analyzing errors from a cognitive

Framework	Grammar theory	grammar perspective
Data Collection	Administered as a written test; responses documented as primary data	Systematic text annotation
Data Analysis	Five stages (see workflow below)	Combines qualitative interpretation with descriptive quantitative analysis

The five-stage analytical procedure moved from raw language samples to a cognitively grounded interpretation of learners' errors:The five stages proceeded as follows: **(1**) collecting language samples from the 224 erroneous responses out of the 20-item passive voice transformation test; (2) identifying errors by comparing each student response word-by-word against the grammatically correct target sentence to locate the point of deviation; (3) describing each identified deviation using the Surface Strategy Taxonomy proposed by Dulay, Burt, and Krashen (1982), which categorizes errors into omission, addition, misformation, and misordering; (4) explaining the probable linguistic source of each error (e.g., L1 interference, overgeneralization, incomplete rule application) through the Cognitive Grammar concepts of temporal grounding, participant profiling, and construal; and (5) evaluating the frequency and communicative impact of each error category to determine which types most seriously impeded intended meaning. Frequencies and percentages were calculated using descriptive statistics, and errors were subsequently interpreted through Langacker's (2008) Cognitive Grammar framework — particularly temporal grounding, profiling, participant perspective, and construal — to explain the cognitive processes underlying students' passive voice constructions.

Role of the researcher and trustworthiness

In this qualitative study, the researcher served as the primary instrument responsible for collecting, classifying, analyzing, and interpreting the data (Creswell & Creswell, 2023). To strengthen trustworthiness, inter-rater agreement was employed during error classification (Mackey & Gass, 2021). A stratified random sample of 46 data points (20% of the 224 identified errors, proportionally representing all seven error categories) was independently re-coded by a second rater — an English grammar lecturer — using blind coding without access to the primary researcher's original classification.

Table 2. *Inter-rater reliability results*

Measure	Value	Interpretation
Sample re-coded	46 of 224 errors (20%)	Stratified across all seven categories
Percentage agreement	59.5%	—
Cohen's Kappa	0.397	"Fair agreement" (Landis & Koch, 1977)

Analysis of the disagreements revealed two main sources of divergence: (a) differing interpretations of what constitutes an "error," particularly when a response was grammatically well-formed but did not match the specific tense targeted by the test item, and (b) conceptual overlap among the "Inappropriate Use of Tense," "Verb Form Errors," and "Inappropriate Use of Auxiliary Verbs" categories, which share partially overlapping grammatical features — a limitation discussed further in the study's Limitations section. Theoretical triangulation was additionally employed by integrating the perspectives of Error Analysis and Cognitive Grammar to strengthen interpretation of the findings.

The 20 test items were initially developed by an English grammar lecturer at STBA JIA based on Azar and Hagen's (2026) passive voice framework, grounding the instrument in an established pedagogical grammar reference. Both the test items and the error classification criteria were then reviewed through expert judgment by a second lecturer specializing in English grammar and applied linguistics, who evaluated the relevance, clarity, and appropriateness of the items for measuring students' understanding of passive voice constructions and confirmed that all 20 items adequately represented the targeted structures across the selected tense forms.

RESULTS AND DISCUSSION

The findings of this study are presented descriptively through tables, figures, and explanations to illustrate the distribution of passive voice errors and the underlying cognitive processes experienced by students. The analysis aims to identify the dominant error categories and explain how learners conceptualize passive constructions based on Cognitive Grammar theory.

A total of 224 errors were identified in students' responses to the passive voice

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transformation test. Errors were classified according to the Surface Strategy Taxonomy proposed by Dulay et al. (1982), while their cognitive interpretation drew on the Cognitive Grammar framework developed by Langacker (2008, 2017).

Distribution of error categories

Table 1. *Distribution of passive voice error categories*

Error Category	Function	Frequency (F)	Percentage (%)
Inappropriate use of tense	Incorrect temporal reference in passive constructions	83	37.1
Verb form errors	Incorrect use of past participle forms	59	26.3
Inappropriate use of auxiliary verbs	Incorrect use of passive auxiliaries	30	13.4
Inappropriate verb use	Incorrect lexical selection	16	7.1
Omission of auxiliary verbs	Absence of required passive auxiliaries	15	6.7
Misordering errors	Incorrect placement of sentence elements	16	7.1
Omission of letters	Spelling errors in passive forms	5	2.2
Total		224	100

Based on Table 1, a total of 224 errors were found in the formation of English passive sentences. The most dominant error type was inappropriate use of tense (83 cases, 37.1%), indicating that many students struggle to adjust passive sentence forms to the correct time reference. This pattern aligns with prior research on EFL learners' tense difficulties (Gass et al., 2025; Mubarok & Budiono, 2022; Mustakim et al., 2025). Because passive construction requires learners to integrate tense and voice marking simultaneously, errors can arise when students attend to one grammatical component while neglecting the other.

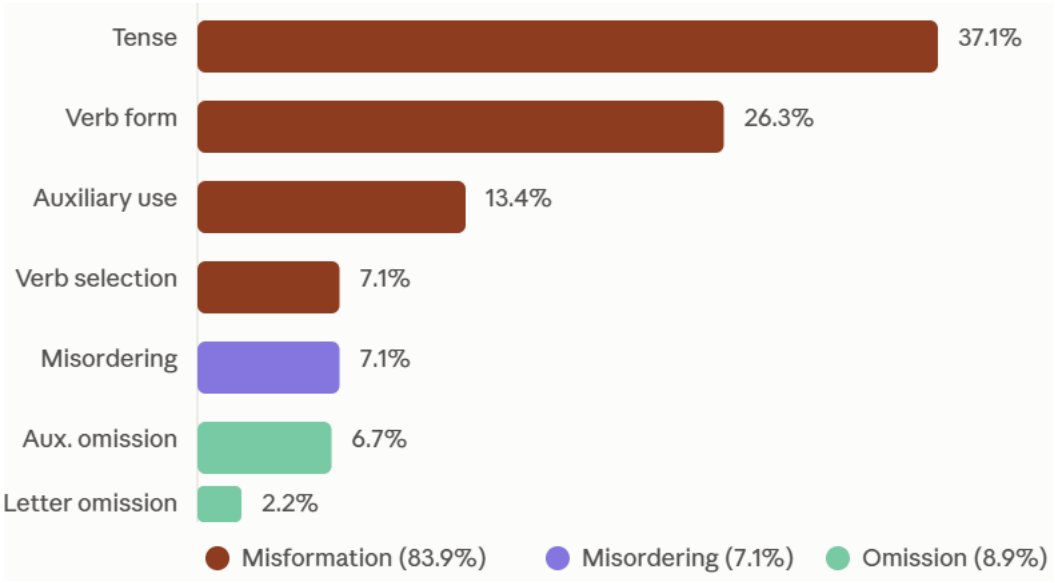

Figure 1. *Distribution of passive voice error categories*

The second most common error was verb form errors (59 cases, 26.3%), related to improper past participle use — likely reflecting limited mastery of irregular verb forms and a tendency to overgeneralize regular patterns. Since the past participle is mandatory in passive construction, verb form inaccuracies directly affect grammatical accuracy and can obscure intended meaning. Inappropriate use of auxiliary verbs followed (30 cases, 13.4%), reflecting difficulty selecting auxiliaries matching tense and subject agreement, while a related but distinct pattern — omission of auxiliary verbs (15 cases, 6.7%) — showed some learners omitting the required *be* form entirely. Together, these findings suggest students have not fully mastered the structural relationship between auxiliaries and past participles.

Inappropriate verb use and misordering errors each accounted for 16 cases (7.1%). The former reflects lexical selection problems — verbs that are semantically or grammatically inappropriate

— showing that passive voice formation involves vocabulary knowledge as well as grammatical structure. The latter reflects difficulty placing sentence elements correctly. The least frequent error, omission of letters (5 cases, 2.2%), consisted mainly of spelling errors, suggesting students' orthographic ability is relatively adequate and their difficulties lie predominantly in grammatical rather than orthographic aspects.

Overall, the predominance of tense and verb form errors suggests learners struggle to coordinate multiple grammatical elements simultaneously — tense marking, auxiliary selection, and past participle formation — indicating that passive voice instruction should emphasize the relationship between tense and voice rather than treating it as an isolated formulaic pattern.

This study's 83.9% overall misformation rate is considerably higher than the 65.45% reported by Windasari et al. (2023) among Indonesian high school students. Several factors may explain this gap: this study's 20-item instrument spanned eight tense forms, including more cognitively demanding structures like past perfect and modal passive, while Windasari et al.'s instrument, based on high school curriculum material, covered a narrower tense range. This study's more granular four-way subdivision of misformation (tense, verb form, auxiliary use, verb selection) also captures more error variants than a coarser classification scheme would. Nonetheless, both studies converge on misformation as the dominant error type across educational levels and test formats, reinforcing this as a robust, widespread pattern among Indonesian EFL learners.

Cognitive grammar analysis of passive voice errors

To explain the underlying causes of these errors, findings were further analyzed through Langacker's (2008, 2017) Cognitive Grammar framework, which holds that grammatical constructions reflect speakers' conceptualization of events rather than merely formal rules (Langacker, 2008, 2017; Perek, 2023; Weissweiler et al., 2025).

Table 2. *Cognitive sources of passive voice errors*

Cognitive Category	Description	Frequency (F)	Percentage (%)
Temporal grounding	Difficulty locating events within the appropriate temporal domain	111	49.6
Participant profiling	Difficulty focusing on the affected participant	48	21.4
Event construal	Difficulty conceptualizing passive events appropriately	40	17.9
Symbolic encoding	Difficulty mapping conceptual meanings onto grammatical forms	25	11.1
Total		224	100

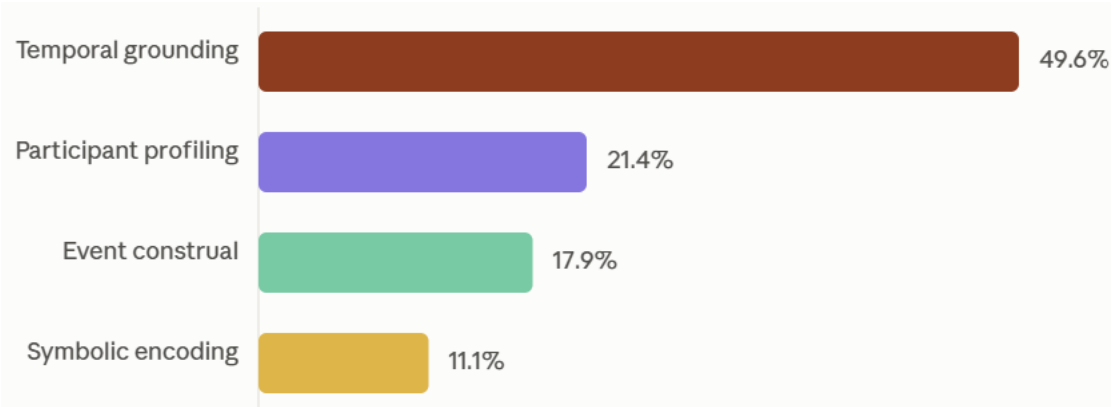

Figure 2. *Distribution of cognitive sources of passive voice errors*

Temporal grounding emerged as the most dominant cognitive category (111 cases, 49.6%). Within Cognitive Grammar, tense functions as a conceptual device allowing speakers to locate an event relative to the moment of speaking (Langacker, 2008, 2017). This high frequency indicates that learners often fail to establish the correct temporal perspective before encoding a sentence grammatically, leading to inappropriate tense selection or incorrect tense marking. This

tendency may be reinforced by negative transfer from Indonesian, where passive constructions (typically marked with the prefix *di-*) do not require verb inflection to indicate tense; temporal reference is instead conveyed through separate lexical markers such as *sudah* ("already"), *sedang* ("currently"), and *akan* ("will"). Because Indonesian speakers do not need to encode tense directly within the passive verb form, they may construct passive events without the same temporal grounding English passive constructions require — a plausible explanation for why temporal grounding, rather than participant profiling or event construal, dominated the error distribution.

Participant profiling was the second most frequent category (48 cases, 21.4%), reflecting difficulty shifting attention from the agent of an action to the participant affected by it — a shift central to passive construction (Langacker, 2008, 2017). Many learners appear to construct events from an active perspective by default and struggle to reorient that perspective. Event construal followed (40 cases, 17.9%), reflecting difficulty conceptualizing an event as a passive process viewed from the recipient's perspective rather than the agent's; learners struggling here may understand the passive voice's grammatical components individually without integrating them into a coherent conceptual representation of the event.

Symbolic encoding, though the smallest category (25 cases, 11.1%), remains theoretically important: it reflects difficulty translating an already-correct conceptualization into grammatical form — the learner may understand the intended passive meaning but still struggle to express it through the right combination of auxiliaries, verb forms, and structure (Langacker, 2008, 2017).

The combined frequency of participant profiling and event construal errors (39.3%) suggests a substantial number of students struggle specifically with the perspective shift passive voice requires — supporting Langacker's (2008, 2017) broader claim that grammatical structures are meaningful and reflect how speakers construct experience. These findings also align with form-focused instructional approaches emphasizing the integration of form, meaning, and use (Rafiei Sakhaei et al., 2024), and with Boers (2021) and Pérez-Paredes et al. (2025), both of whom argue that passive voice instruction should extend beyond formal construction to help learners understand *why* speakers choose passive constructions to represent particular events, participants, and temporal relationships.

Discussion of representative errors

To illustrate how different error types reflect different cognitive difficulties, representative examples from each category are presented below.

Table 3. *Representative examples of passive voice errors and cognitive interpretations*

Error Category	Student's Answer	Correct Form	Cognitive Interpretation
Inappropriate use of tense	The window was opened.	The window has been opened.	Learner construes the event as a completed past occurrence rather than a past action with present relevance.
Verb form error	The package was send by a friend.	The package was sent by a friend.	Learner recognizes the passive event but fails to encode it through the appropriate symbolic form.
Auxiliary verb error	The window have opened.	The window has been opened.	Learner recognizes the required auxiliary but fails subject–verb agreement, using "have" for a singular subject.
Inappropriate verb use	My dad will be off a new job.	My dad will be offered a new job.	Learner identifies the intended verb but fails to convert it into the required past participle form.
Misordering error	He has been not seen for ages.	He has not been seen for ages.	Learner conceptualizes the event correctly but inaccurately organizes sentence elements.
Omission of letters	The novel was writen a hundred years ago.	The novel was written a hundred years ago.	Learner successfully construes the passive event but incompletely encodes the symbolic form.

The tense error (*The window was opened* instead of *has been opened*) shows the learner constructing the event as fully completed in the past rather than as an action whose result remains relevant. The verb form error (*was send*) and auxiliary error (*have opened*) both point to difficulties in symbolic encoding: learners appear to grasp who the affected participant is, yet cannot

yet realize that conceptualization through correct grammatical form. Two further examples from the corpus reinforce this pattern: one learner produced *He has been taked to the airport* instead of *taken*, applying the regular *-ed* pattern to an irregular verb — an overgeneralization consistent with usage-based accounts of second-language morphological development (Perek, 2023) — while another produced *The window has opened* instead of *has been opened*, omitting *been* entirely, a pattern also reported among vocational-level EFL learners in Putri's (2025) study of auxiliary misformation.

The lexical error in *My dad will be off a new job* suggests that difficulties are not confined to tense and auxiliary structure — improper lexical choice may itself reflect conceptual difficulty, not merely limited vocabulary. The misordering error (*has been not seen*) and letter-omission error (*writen*) similarly suggest the learner understood the intended passive meaning but struggled to fully realize it in correct linguistic form — indicating that surface errors can originate at different points in the mapping between conceptualization and linguistic expression.

Collectively, these findings support Langacker's (2008, 2017) view that grammatical constructions are inherently meaningful, reflecting how speakers construct experience rather than merely following an autonomous system of formal rules. Passive voice errors, accordingly, should not be read solely as violations of grammatical rules but as indicators of learners' difficulty constructing appropriate conceptualizations and mapping them onto linguistic form. This interpretation aligns with form-focused language learning research emphasizing the integration of form, meaning, and use (Rafiei Sakhaei et al., 2024; Sami et al., 2025), and with Pérez-Paredes et al. (2025) and Boers (2021), who stress teaching grammatical constructions within meaningful contexts and helping learners understand the cognitive motivations underlying language patterns.

It is worth unpacking what this integration actually requires, because "form, meaning, and use" is often invoked as a slogan without specifying which cognitive operation each term corresponds to. The four cognitive categories identified in this study's analysis map onto this triad with unusual precision, and making that mapping explicit clarifies exactly where instruction needs to intervene.

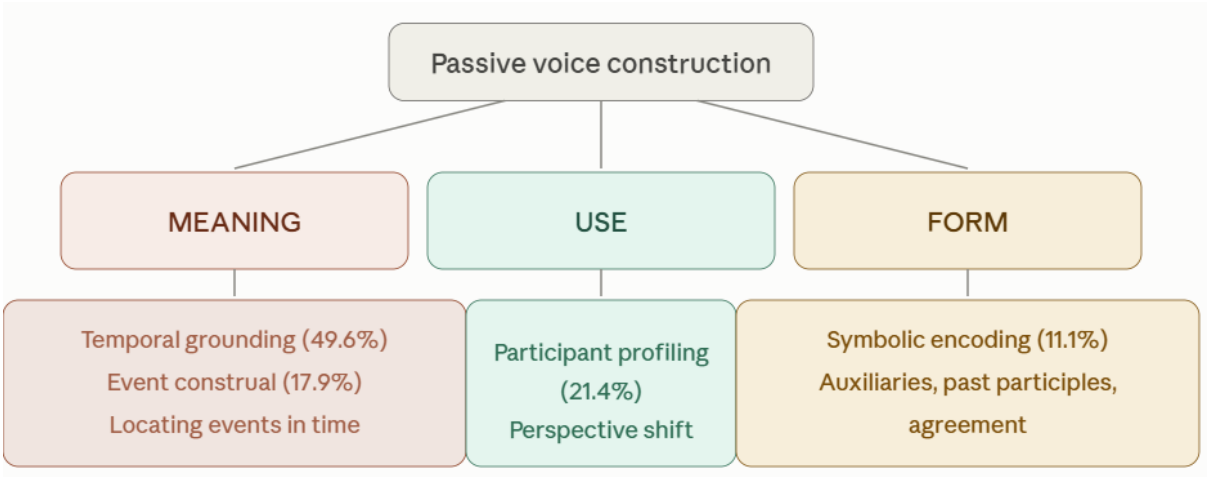

Figure 3. *Mapping cognitive error sources onto the form–meaning–use triad*

Temporal grounding and event construal, together accounting for 67.5% of the cognitive-source distribution, both fall squarely on the *meaning* side of the triad: both concern how a learner conceptualizes an event's timing and structure before any grammatical form is chosen at all. This is precisely why drilling verb-form paradigms alone — a common classroom default — fails to touch the majority of the errors this study documents: a student who has not yet correctly conceptualized *when* an event occurred, or *that* the sentence should foreground the affected participant rather than the doer, cannot be expected to select a correct passive form even if the paradigm itself has been memorized flawlessly. Chapman-style modeling exercises that make a speaker's temporal reasoning visible — asking students explicitly "is this event finished with lasting relevance, or simply a past occurrence?" before any verb is written — would intervene at exactly this conceptual layer, consistent with Ng's (2023) finding that systemic theoretical instruction in the English tense system, paired with Cognitive Grammar explanation,

shapes how learners perceive tense meaning rather than merely its form.

Participant profiling occupies an intermediate position, bridging meaning and use: it is a conceptual operation (deciding who the sentence is "about") that only becomes visible through actual language use in context — a learner's tendency to profile the agent by default likely reflects the discourse patterns most frequent in their prior L1 and L2 input, where active-voice, agent-first construction dominates ordinary conversation. Instruction targeting this category benefits from discourse-level, not sentence-level, practice: presenting learners with short passages where the same event is narrated first from the agent's perspective and then from the affected participant's perspective makes the *communicative motivation* for passive voice visible, rather than treating the passive as an arbitrary transformation exercise divorced from any communicative purpose — an approach consistent with Suzuki's (2024) emphasis on processing-based activities that let learners notice and analyze target structures within authentic input before producing them.

Symbolic encoding, the smallest category at 11.1%, is the only one of the four that corresponds cleanly to *form* in the traditional sense — the mechanical mapping of an already-correct conceptualization onto the right auxiliary, participle, and agreement pattern. This is also, not coincidentally, the category most amenable to conventional drilling and explicit rule instruction, which may explain why it registers as the least frequent source of error in a population that has already completed formal grammar coursework (as this study's fifth-semester participants had): rote-learnable form-level knowledge responds to instruction relatively well, while the deeper conceptual operations of temporal grounding and event construal do not, because they are rarely taught as conceptual operations at all — most grammar curricula present tense and voice as fixed paradigms to memorize rather than as construal choices a speaker actively makes.

This distribution has a direct diagnostic implication for curriculum design: a curriculum that allocates instructional time proportionally to traditional grammar-teaching convention — heavy on paradigm drilling (targeting symbolic encoding) and light on conceptual framing (targeting temporal grounding and construal) — is investing most heavily in exactly the category this study finds learners struggle with *least*, while under-addressing the two categories responsible for two-thirds of all observed errors. Realigning that instructional investment to match the actual distribution of cognitive difficulty — more explicit attention to event conceptualization and perspective-shifting, proportionally less to auxiliary-and-participle drilling alone — is the most direct pedagogical implication this study's cognitive-source data supports, and one a purely error-form analysis (without the Cognitive Grammar layer) would never have been positioned to reveal.

Limitations

Data coding was conducted primarily by the researcher, with classifications reviewed and discussed with a supervisor to maintain consistency with the established taxonomy. Independent re-coding of a stratified 20% sample yielded 59.5% percentage agreement and a Cohen's Kappa of 0.397 ("fair agreement," Landis & Koch, 1977) — a level supporting this study's exploratory purpose while indicating that boundaries between Inappropriate Use of Tense, Verb Form Errors, and Inappropriate Use of Auxiliary Verbs require further clarification in future research. The study also involved only fifth-semester students from a single institution, limiting generalizability to other proficiency levels and educational contexts. Future research should involve multiple independent raters throughout coding, clarify overlapping category definitions, and include participants from diverse institutions and proficiency levels to strengthen classification consistency and broaden understanding of passive voice errors and their cognitive sources.

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