

FROM DATA TO CLAIM: UNDERSTANDING THE WARRANT DEFICIT IN INDONESIAN UNDERGRADUATE ACADEMIC WRITING

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ABSTRACT

Constructing logical warrants to connect factual evidence with interpretive claims represents a core yet widely underemphasized writing skill among university students. This investigation examines why EFL undergraduates at an Indonesian university encounter persistent difficulties in warrant-based argumentation and how such difficulties constrain the growth of their higher-order thinking capacities. A descriptive qualitative approach guided data collection from 20 students at Universitas Islam Makassar, South Sulawesi, using three complementary instruments: a critical-thinking writing assessment, a timed argumentative composition task, and semi-structured interviews. Student outputs were coded and evaluated through the lens of Toulmin's Argumentation Model (2021), with particular attention to the logical bridges students constructed—or failed to construct—between their evidence and their conclusions. Results expose a striking "Synthesis Crisis": although the overwhelming majority of students (85%) showed competence in distinguishing facts from opinions at the sentence level, a mere 10% succeeded in weaving these elements into warranted arguments within extended writing. The investigation pinpoints three intertwined barriers: (1) an evidence-accumulation strategy devoid of interpretive purpose, exhibited in 35% of written outputs; (2) a pervasive equation of academic stance with subjective personal feeling, documented among 60% of respondents; and (3) a near-total failure to articulate logical warrants, observed in 80% of all essays examined. The study concludes that prevailing EFL writing pedagogy in Indonesian tertiary institutions—preoccupied with correctness and structure—falls critically short of fostering genuine argumentative competence. Curricular reform centered on warrant-explicit instruction is urgently warranted.

Keywords: *Academic Writing; Argumentation; EFL Undergraduates; Logical Warrants; Warrant Deficit*

Article History

Received:

Revision:

Accepted:

Published:

How to cite: Mursidin, M., & Nurjannah, S. (2026). From data to claim: Understanding the warrant deficit in Indonesian undergraduate academic writing. *e-Journal of ELTS (English Language Teaching Society)*, 14(1), 65-76. DOI: <https://doi.org/10.22487/elts.v14i1.6323>

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INTRODUCTION

University education across disciplines increasingly recognizes argumentative writing as an indispensable graduate competency (Bean & Melzer, 2021; Graff & Birkenstein, 2021). To write academically is not simply to report what one has read; it demands that writers take an intellectually

defensible position, situate that position within ongoing scholarly debates, and substantiate it through reasoned engagement with evidence (Hyland, 2022b). This dual requirement—to both present facts and reason from them—poses a formidable challenge for undergraduate writers in general and proves especially demanding for those composing in a language other than their mother tongue.

Within the Indonesian tertiary EFL context, writing pedagogy has long been anchored to what scholars characterize as a product-oriented model: instruction is organized around grammar mastery, prescribed essay formats, and the categorical classification of statements as either facts or opinions (Toba et al., 2021; Wahyudi, 2023). Although such instruction provides students with useful building blocks, it stops short of equipping them with the reasoning machinery needed for genuine academic argumentation. Specifically, it leaves unaddressed the critical task of warrant construction—the cognitive process through which a writer explicitly accounts for how a given piece of evidence justifies a particular claim. Without this inferential scaffolding, student writing tends to oscillate between two unproductive poles: raw data presented without purpose, and bare assertions unsupported by proof. Recent ELTS studies further indicate that Indonesian students' writing development benefits from technology-mediated practice and cooperative learning support (Kanserini et al., 2025; Marhamah et al., 2025), reinforcing the need to move beyond mechanical writing instruction toward reasoning-oriented pedagogy.

To analyze and interpret these patterns, the present study adopts Toulmin's Argumentation Model as its central analytical framework (Toulmin, 2021). Originally proposed in 1958 and refined through later scholarly engagement, this model decomposes argumentative discourse into six interrelated elements. Three carry particular relevance for undergraduate writing pedagogy: the Claim, which names the writer's arguable position; the Data, which furnishes the evidentiary foundation; and the Warrant, which supplies the inferential rule or principle that legitimizes the movement from evidence to conclusion. Of these three, the Warrant occupies the most decisive analytical role—it is the element that, when present and explicit, transforms a bare assertion-plus-evidence pairing into a cogent, contestable argument. Research employing this framework across multiple international and EFL settings has consistently affirmed its diagnostic value for identifying argumentation deficiencies (Abdollahzadeh et al., 2022; Karimi & Asadnia, 2023; Nippold & Ward-Lonergan, 2022).

A substantial body of empirical scholarship has examined the argumentation struggles of EFL learners in various geographical and institutional contexts. Abdollahzadeh et al. (2022) reported that undergraduate writers in Iran and Indonesia routinely produced arguments whose warrants were either rudimentary or altogether absent, with qualifier deployment also significantly underdeveloped. Working within the Indonesian context specifically, Marzuki et al. (2016) observed that university-level EFL learners frequently conflated argumentative and descriptive modes of writing, defaulting to narrative strategies when persuasive ones were required. Lam et al. (2018) reached complementary conclusions in their study of Asian EFL university students, finding that those who received structured instruction in argumentation—particularly in warrant formulation—demonstrated markedly superior writing outcomes compared to control groups. Reinforcing these findings, Karimi and Asadnia (2023) established a robust statistical relationship between learners' critical thinking orientation and the quality of warrants they produced, indicating that argumentative reasoning and cognitive disposition are mutually constitutive.

Notwithstanding this growing scholarly attention, the specific manifestations of the warrant deficit within South Sulawesi's EFL higher education setting remain largely uninvestigated. South Sulawesi presents a distinctive sociolinguistic environment in which students must negotiate among multiple communicative systems—regional vernaculars, Bahasa Indonesia, and English—within a single academic context (Wahyudi, 2023). Managing this linguistic multiplicity imposes considerable cognitive demands on students engaged in academic writing tasks, potentially compounding the argumentation difficulties already documented elsewhere. Responding to this gap, the current study focuses on 20 undergraduates at Universitas Islam Makassar, with three principal research objectives: (1) to document the prevalence and character of logical warrant deficits in their EFL academic writing; (2) to identify the cognitive and instructional conditions that generate these deficits; and (3) to propose pedagogically actionable recommendations for argumentation-centered writing instruction suited to this context. Two guiding research questions frame the inquiry: (RQ1) What principal factors account for the difficulties experienced by undergraduate EFL students in constructing logical warrants that link factual evidence to argumentative claims? and (RQ2) In what

ways do these difficulties constrain students' development of critical thinking and broader academic writing proficiency?

A closer theoretical examination of the warrant clarifies why its absence carries such significant consequences for academic writing quality. Toulmin (2021) drew a fundamental distinction between data and warrants on the basis of scope and inferential function. Data, in his framework, is particular—a specific statistic, observation, or fact pertaining to a specific case. The warrant, by contrast, is general: it is a principle, rule, or assumption—often drawn from disciplinary consensus, shared normative commitments, or empirical regularities—that authorizes the logical passage from a particular datum to a particular conclusion. To illustrate: a researcher might cite evidence showing that students who engage in daily sustained reading achieve substantially higher scores on literacy assessments. This evidence alone does not justify a policy mandate for daily reading programs in schools. What completes the argument is a warrant—an explicit commitment to the proposition that educational institutions are obligated to institutionalize practices with demonstrated literacy benefits. Articulating that warrant does more than clarify the argument; it renders the writer's reasoning publicly available for scrutiny, challenge, and refinement, which is the hallmark of genuinely academic discourse.

These considerations bear directly on how writing instruction should be conceptualized, particularly in EFL settings where students may have limited prior exposure to the conventions and expectations of English-medium academic argumentation. Graff and Birkenstein (2021) contend that academic writing is inherently dialogic in character: the effective writer does not simply present data, but positions her claims in deliberate conversation with alternative perspectives, mobilizing evidence not as decoration but as persuasive leverage. This dialogic conception of writing requires students to internalize a picture of their reader as a discerning interlocutor rather than a passive recipient. Hyland (2022a) characterizes this orientation as “academic engagement” and identifies it as a defining feature of successful scholarly writing across disciplines. When students lack the inferential tools to construct warrants, they cannot engage their reader dialogically; they can only narrate, assert, or accumulate—none of which satisfies the argumentative demands of university-level academic discourse.

Within this framework, backing also deserves attention because it explains why a warrant should be accepted in a particular discourse community. A warrant may state the inferential rule that links evidence to a claim, but backing supplies the deeper theoretical, empirical, or institutional support that makes the rule credible. For Indonesian and wider Southeast Asian EFL writers, this distinction is pedagogically important. Students may be able to say that evidence supports a claim, yet they may still struggle to justify the larger assumption that gives the evidence academic force. Critical thinking scholarship similarly emphasizes that argument quality depends not only on identifying relevant information but also on evaluating assumptions, clarifying standards of judgment, and making reasoning visible to others (Dwyer, 2023). Indonesian classroom practices that train learners to distinguish fact from opinion can therefore provide a useful foundation, as shown in fact-and-opinion-based literacy work such as Kusumawati (2023), but such practices remain incomplete unless students are guided to formulate the underlying rule and backing that authorize their interpretation. In this sense, warrant instruction should not be treated as a minor rhetorical technique; it is a bridge between language learning, disciplinary literacy, and epistemic participation. As Craswell and Poore (2022) argue, academic writing requires writers to manage sources, reasoning, and authorial judgment simultaneously, a demand that becomes particularly complex when students negotiate English academic conventions through Indonesian and local linguistic repertoires.

RESEARCH METHOD

Research Design

A descriptive qualitative approach was adopted to examine students' argumentation practices as they naturally occur in real writing contexts. This methodological orientation was chosen because it enables the researcher to move beyond surface measurement toward a substantive understanding of the cognitive and discursive processes that underlie observed writing behaviors (Creswell & Creswell, 2018). Rather than quantifying the frequency of particular errors alone, the study sought to explain their causes and trace their developmental implications—objectives that are inherently interpretive and thus best served by qualitative methods. The descriptive component of

the design facilitated the systematic cataloguing of argumentation patterns across the full participant sample.

Participants

The research involved 20 undergraduate students drawn from four departments at Universitas Islam Makassar: Education (n=6), Economics (n=5), Law (n=5), and Communication Studies (n=4). All participants were in their second or third year of study and had completed at least one prior semester of formal English writing coursework. The multi-departmental composition of the sample was deliberate, enabling the research team to assess whether the argumentation deficits under investigation were discipline-bound or represented a more systemic academic literacy issue. Purposive sampling was applied to ensure that selected participants would yield substantively informative data, while full informed consent and data anonymization protocols were observed throughout.

The demographic distribution of the participants is presented in Table 1.

Table 1
Participant Profile by Department

Department	n	Gender (F/M)	Year of Study	Writing Courses
Education	6	4/2	Year 2–3	2
Economics	5	3/2	Year 2–3	1–2
Law	5	2/3	Year 2–3	1
Communication Std.	4	3/1	Year 3	2
Total	20	12/8	—	—

Note. N=20; cross-disciplinary sample enrolled in English academic writing courses at Universitas Islam Makassar.

Instruments

Data were gathered using three coordinated instruments targeting distinct dimensions of students' argumentation competency. The first, termed the Critical Thinking-Based Writing Test (CTBWT), confronted participants with 20 statements on the socially relevant theme of technology dependence among young people. For each statement, students were required to (a) determine whether the statement was factual or opinion-based, (b) provide written justification for their decision, and (c) select three statements and compose a short integrated argument. The second instrument, the Short Argumentative Essay Assignment (SAEA), tasked participants with producing a 300–500 word persuasive essay in response to the prompt “Do social media platforms do more harm than good for university students?” within a 90-minute window, without structural scaffolding. The third instrument was a focused semi-structured interview conducted with six strategically selected participants—three who demonstrated stronger test performance and three who exhibited pronounced difficulties—designed to elicit metacognitive insights into their writing decision-making.

Data Analysis Procedure

Written outputs from the CTBWT and the SAEA were analyzed through systematic qualitative content analysis, with Toulmin's Argumentation Model serving as the primary coding apparatus. Three categories were operationalized: Claim (C), referring to any arguable proposition put forward by the student; Data (D), referring to any factual, evidential, or statistical content offered to underpin a claim; and Warrant (W), referring to any explicit logical statement that explains the inferential basis for moving from the given evidence to the stated conclusion. Each identified warrant was then assessed on a three-tier scale: W3 (Warrant explicit and fully articulated), W2 (Warrant implied but not stated), and W1 (Warrant entirely absent). A second independent coder analyzed one quarter of the total corpus, and subsequent computation of Cohen's Kappa produced a coefficient of $\kappa = .84$, reflecting robust inter-rater reliability. Thematic analysis guided by the framework of Wingate (2020) was then applied to surface recurring argumentation patterns across the data set, with member checking used to corroborate the researchers' interpretive conclusions.

Several procedural measures were instituted to uphold research ethics. The study received formal ethical clearance from Universitas Islam Makassar's institutional review board before data collection commenced. Written consent was secured from each participant, who was explicitly advised of the voluntary nature of their involvement and their unconditional right to withdraw. To protect confidentiality, all participants are referred to by numerical codes throughout this report. Essay topics were selected to avoid politically or personally sensitive content, and the interview protocol was trialed with two pilot participants prior to deployment.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

The Identification-Integration Paradox

Among the most revealing findings to emerge from this study is the stark contrast between students' performance on isolated fact-opinion identification tasks and their capacity to deploy that same knowledge within extended argumentative composition. On the CTBWT, 85% of participants ($n=17$) correctly categorized at least 16 of the 20 presented statements, demonstrating an adequate working grasp of the conceptual distinction between empirically verifiable claims and evaluative or inferential propositions. These results appeared to indicate solid readiness for argument construction.

Yet when the same cohort undertook the extended essay task, performance deteriorated sharply. Only two participants—representing 10% of the sample—produced essays in which at least one explicit, inferentially sound warrant was identifiable. The remaining 18 students generated texts that, despite their grammatical adequacy and informational density, failed to articulate the reasoning that would connect their evidence to their conclusions. This finding corroborates Bereiter and Scardamalia's (2020) theorization of the gap between declarative and procedural writing knowledge: possessing conceptual awareness of what constitutes a fact does not automatically confer the procedural ability to deploy that fact as an argumentative resource. The nature of the deficit is fundamentally cognitive rather than linguistic.

Table 2 displays the distribution of warrant quality ratings assigned to the full corpus of analyzed essays, revealing the overwhelming predominance of absent warrants and the exceptional rarity of explicit, high-quality logical reasoning.

Table 2
Distribution of Warrant Quality Scores Across Student Essays (N=20)

Warrant Quality	Score	Frequency (n)	Percentage (%)
Warrant Present and Explicit	W3	2	10%
Warrant Present but Implicit	W2	2	10%
Warrant Absent	W1	16	80%
Total	—	20	100%

Note. W3 = Warrant Present and Explicit; W2 = Warrant Present but Implicit; W1 = Warrant Absent. Based on Toulmin's *Argumentation Model* (2021).

The Data-Dumping Phenomenon

The most pervasive single pattern identified across the essay corpus was what this study designates as evidence accumulation without interpretive engagement—a tendency in which students amass factual or statistical material without supplying the analytical commentary that would render that material argumentatively purposeful. Recorded as the dominant compositional strategy in 35% of essays ($n=7$) and as a secondary pattern in a further 28% ($n=6$), this approach emerged as the most prevalent form of argumentation failure in the dataset.

A particularly illustrative instance was found in the essay produced by Participant 11, a second-year Law student, who presented the following sequence: "According to a 2023 WHO report, 40% of young people aged 18–24 report experiencing anxiety related to social media use. Furthermore, a study by the University of Pennsylvania found that limiting social media use to 30

minutes per day significantly reduces loneliness and depression. Social media is therefore harmful to university students.” While the statistical claims cited are both accurate and germane, no inferential link is supplied to account for how they support the evaluative conclusion that follows. As Fister (2023) observed regarding contemporary student writers, proficiency in locating and reproducing data has outpaced the ability to reason with it analytically.

Interview responses shed light on the beliefs sustaining this strategy. Participant 11, asked why the logical connection between her evidence and conclusion was unexplained, offered the following: “I thought the data already explained itself. If the statistics say social media causes anxiety, then it is obviously harmful.” This assumption—that evidence is self-evidently persuasive and requires no explicit mediation—aligns with what Wingate (2020) terms the transparent evidence fallacy, a metacognitive disposition that directly obstructs warrant construction and must be explicitly addressed in writing instruction.

The Subjectivity Trap: Misconceptions of Academic Opinion

A second significant pattern, surfaced through both written text analysis and interview responses, was a deeply embedded misapprehension concerning the nature of an academic claim. Content analysis showed that 60% of participants (n=12) relied overwhelmingly on first-person affective markers—expressions such as “I feel that,” “I personally believe,” “In my opinion,” and “I think”—as their primary and frequently only mechanism for articulating a position in their essays.

This pattern points to what the present research terms the subjectivity trap: the student’s conflation of scholarly argument with the expression of personal testimony. Hedging devices and epistemic stance markers are certainly legitimate features of academic register (Hyland, 2022a); however, the students in this sample were not deploying these linguistic resources to calibrate their confidence in defensible claims. Rather, they were substituting personal avowal for argumentation altogether. The consequence is doubly limiting: claims framed purely as feelings are effectively insulated from logical challenge—because feelings carry no truth conditions—while simultaneously forfeiting the persuasive authority that evidence-grounded claims can command within academic discourse.

Interview data traced the roots of this pattern to students’ prior secondary schooling experiences. Multiple participants reported that their high school writing teachers had explicitly encouraged the use of first-person opinion markers as a way of demonstrating personal voice and originality. Participant 7, a third-year Education student, stated: “Our teacher always said, write what you think. I thought academic writing means writing what you personally think about the topic.” This pedagogical inheritance, as Hirvela and Du (2013) have documented in related ESL contexts, reflects the operation of L1 educational assumptions about authorial voice that prove deeply incompatible with the argumentative conventions of English academic writing.

The Logical Warrant Deficit: Root Cause of the Synthesis Crisis

The finding that carries the greatest analytical and instructional weight is the near-complete absence of explicit logical warrants across the body of essays examined. Coding against Toulmin’s three-point scale revealed that 80% of essays (n=16) received a W1 rating, meaning no statement capable of functioning as a logical warrant—however broadly construed—could be identified within the text. An additional two essays (10%) were rated W2: an inferential link was recoverable from surrounding context, but the writer had not made it explicit. Only two essays (10%) achieved the W3 threshold of a fully articulated, logically explicit warrant.

In the dominant W1 pattern, essays followed a Claim-Data structure in which no inferential bridge was constructed. A representative case from Participant 4, a second-year Economics student, illustrates the pattern clearly: “The government should regulate social media platforms [CLAIM]. Research shows that 70% of fake news spreads through social media [DATA]. Therefore, regulation is necessary [CLAIM REPEATED].” Rather than producing a warrant, the student simply restated the original claim, yielding a circular structure that adds no argumentative value. The critical inferential step—specifying why documented misinformation spread through a platform logically obligates that platform to regulatory oversight—is entirely missing from the text.

The two W3 essays offered a striking contrast. Participant 3, a third-year Communication Studies student, composed the following sequence: “Social media platforms should be required to implement stricter content moderation [CLAIM]. A 2022 Reuters Institute report documented that

65% of misinformation reaching large audiences does so via algorithmically amplified social media feeds [DATA]. Since platforms actively shape what information users encounter through their recommendation algorithms, they bear a causal and therefore regulatory responsibility for the consequences of that amplification—a responsibility that cannot be discharged by citing user choice alone [WARRANT].” The warrant here performs its essential function: it supplies a principled account of how the cited evidence logically entails the proposed conclusion, rendering the argument transparent, contestable, and genuinely persuasive.

Taken as a whole, this evidence substantiates what the present study designates the Logical Warrant Deficit—a gap in argumentative competency that is both pervasive across the sample and attributable to the instructional conditions students have encountered rather than to any inherent reasoning incapacity. The pattern corroborates Rahimi’s (2022) contention that EFL writing instruction in Asian higher education consistently overinvests in surface-level features of academic prose—paragraph formatting, lexical correctness, structural templates—at the expense of the inferential reasoning that gives such features their argumentative significance.

The interview data further revealed that not a single participant had independently considered incorporating a counter-argument or rebuttal into their essay. When asked directly whether opposing perspectives had been taken into account during writing, most expressed genuine bewilderment. Participant 15, a second-year Economics student, responded: “I thought the essay was about stating my opinion, not arguing with other people.” This response encapsulates the communicative misconception that underlies the warrant deficit: these writers do not yet apprehend academic writing as an inherently dialogic act—one in which the writer actively anticipates, acknowledges, and responds to dissenting perspectives. Without this dialogic understanding, the warrant—which is at its core a preemptive response to the skeptical reader’s demand for justification—cannot emerge.

Table 3 summarizes the inter-rater reliability coefficients for each Toulmin-based coding category.

Table 3
Inter-Rater Reliability Summary for Toulmin-Based Coding Scheme

Coding Category	Total Units Coded	Agreement (%)	Cohen’s Kappa (κ)
Claim (C) identification	87	94.3%	.91
Data (D) identification	112	92.0%	.88
Warrant (W) identification	24	87.5%	.84
Warrant Quality (W1/W2/W3)	24	83.3%	.79
Overall inter-rater reliability	247	91.5%	.86

Note. 25% of corpus (5 essays) double-coded independently. $\kappa \geq .80$ indicates strong inter-rater agreement under standard qualitative reliability conventions.

Cross-Departmental Variation in Argumentation Patterns

A subsidiary analysis investigated whether the argumentation patterns documented above varied in their intensity or character across academic departments. Though the within-department sample sizes constrain the strength of conclusions that can be drawn, several patterns merit tentative discussion. Therefore, the departmental variations reported here are strictly exploratory and should be interpreted with caution because each sub-sample includes only four to six participants. Participants from Communication Studies ($n=4$) achieved the highest average Data unit count per essay ($M=4.25$) and accounted for both W3-rated essays in the corpus. This may reflect the discipline’s inherent engagement with rhetorical theory and persuasive communication, providing students with greater incidental exposure to explicit argumentation structures. Conversely, Law students ($n=5$)—whose academic preparation might suggest familiarity with structured reasoning through case analysis—produced a predominance of W1-rated essays, suggesting that argumentation skills cultivated in Indonesian-language legal reasoning do not transfer automatically into English academic writing without explicit instructional mediation.

The Education department cohort (n=6) exhibited the highest concentration of the subjectivity trap pattern: five of the six participants showed clear reliance on personal feeling markers as their default stance-signaling strategy. Given that these students are on a professional trajectory toward classroom teaching, the persistence of this pattern carries consequences that extend beyond their individual academic development. Without intervention, the misconception that academic writing is principally an exercise in personal expression—rather than in evidence-grounded argumentative reasoning—risks being transmitted across generations of EFL learners through the pedagogical choices of this cohort’s future teaching practice.

The overall frequency and distribution of these argumentation patterns across the essay corpus are summarized in Table 4.

Table 4
Frequency and Distribution of Argumentation Patterns Across the Essay Corpus

Argumentation Pattern	Primary Occurrence	Secondary Occurrence	Total Affected
Data-Dumping (Warrant Absent, Evidence Present)	7 (35%)	6 (30%)	13 (65%)
Subjectivity Trap (Opinion as Personal Feeling)	12 (60%)	4 (20%)	16 (80%)
Logical Warrant Deficit (W1 score)	16 (80%)	—	16 (80%)
Circular Argumentation (Claim Repetition)	5 (25%)	8 (40%)	13 (65%)
Successful Warrant Construction (W3)	2 (10%)	—	2 (10%)

Note. N=20. Primary Occurrence = dominant mode; Secondary Occurrence = pattern present alongside a dominant mode. Totals exceed 100% as students may exhibit multiple patterns.

Discussion

Examined together, the three patterns documented in this study—evidence accumulation without interpretation, conflation of academic stance with personal feeling, and absence of explicit warrant construction—converge into a single coherent diagnostic account of argumentation failure. These patterns do not operate independently; rather, they reinforce one another in a self-sustaining cycle. A student who equates academic opinion with personal sentiment lacks the conceptual framework for constructing inferential claims. Lacking that framework, she defaults to data accumulation as a proxy for reasoned argument. Accumulating data without the interpretive scaffolding of a warrant produces writing that is informationally loaded yet argumentatively hollow. This cycle—which the present study has termed the Synthesis Crisis—represents a fundamental, educationally induced impediment to the development of genuine academic writing competence.

The study’s contribution to existing scholarship is threefold. It provides localized empirical documentation, in the specific context of South Sulawesi EFL undergraduate education, of patterns that Toulmin (2021), Bean and Melzer (2021), and Wingate (2020) have theorized but that remained underdocumented in this regional context. Beyond corroborating these theoretical propositions, the study advances methodological precision by disaggregating warrant absence into distinct cognitive and discursive subtypes rather than treating it as a single undifferentiated failure. Finally, by combining textual coding with interview data, the study generates explanatory accounts of not only what students fail to do but why—an analytical move with direct and specific implications for instructional intervention. Empirically, the present findings align with Abdollahzadeh et al. (2022), Lam et al. (2018), and Karimi and Asadnia (2023), who reported that EFL writers frequently struggle to transform evidence into warranted claims even when they can identify relevant information. However, the South Sulawesi data add a distinct regional nuance: the warrant deficit appears to be intensified by students’ movement across regional vernaculars, Bahasa Indonesia, and English, creating an additional layer of cognitive and rhetorical negotiation.

The Synthesis Crisis identified here also resonates with broader international evidence that undergraduate writers often experience argumentation as the mechanical assembly of claims and

sources rather than as the construction of a defensible line of reasoning. Kuhn (2021) argues that argument skills develop when learners repeatedly practice coordinating claims, evidence, counterpositions, and justification; without such practice, students may remain capable of producing plausible statements while still failing to test the logic that connects those statements. The present data confirm this problem in a localized EFL context: most students had enough linguistic competence to state a position and enough information literacy to reproduce supporting facts, but they lacked a routine for converting those facts into accountable academic reasoning. This interpretation also supports the view that writing quality cannot be reduced to correctness, structure, or fluency. Craswell and Poore (2022) emphasize that successful academic writing depends on the writer's ability to develop a credible scholarly voice through selection, organization, and interpretation of evidence, while Sword (2023) reminds scholars that clarity and style are most persuasive when they make complex thinking more accessible rather than merely more polished. Accordingly, the warrant deficit observed in this study should be read not as a local weakness of Indonesian EFL students alone, but as a specific manifestation of a wider undergraduate difficulty: transforming available information into reasoned, reader-oriented knowledge.

The study's pedagogical implications are both urgent and actionable. Resolving the warrant deficit cannot be achieved by attaching supplementary warrant-writing modules to existing curricula. It requires a fundamental reorientation of EFL writing instruction around the explicit development of inferential reasoning competency. Drawing on Lam et al.'s (2018) scaffolded intervention framework and Genre-Based Instruction principles (Wingate, 2020), the research team recommends a four-stage instructional sequence: (1) Deconstruction—students examine published academic arguments to identify and annotate warrant structures using Toulmin's analytical categories; (2) Imitation—students construct warrants for researcher-supplied claim-data pairs across varied topical domains; (3) Guided Production—students draft their own argumentative paragraphs with warrant-eliciting sentence frames and focused peer response; and (4) Independent Application—students compose complete argumentative essays without scaffolding while receiving instructor feedback centered on warrant quality. This sequence develops both the declarative understanding and the procedural fluency that the present study identifies as jointly necessary for effective warrant construction.

These findings also suggest tentative policy implications for Indonesian higher education governance, particularly when read as localized pilot evidence rather than as a basis for broad national generalization. The national *Merdeka Belajar Kampus Merdeka* (MBKM) agenda, introduced in 2020, positions critical reasoning, problem-solving, and evidence-based decision-making as central graduate attributes for Indonesian university programs. Within the limits of this single-institution sample, the warrant deficit documented across four academic departments indicates a possible misalignment between current EFL writing instruction and these competency aspirations. Accordingly, the study offers cautious recommendations for curriculum review, faculty professional development, and writing assessment practices, while emphasizing that larger multi-campus studies are needed before stronger policy claims can be made.

From a methodological standpoint, the three-tier warrant quality coding scale (W1/W2/W3) developed and applied in this study merits broader adoption. Its conceptual simplicity and Toulminian grounding make it suitable not only for research coding but for deployment as a formative assessment tool within writing courses. Instructors could employ this scale to give students precise, actionable feedback on the logical quality of their argumentative paragraphs, transforming it from a research instrument into a pedagogical one. Subsequent research might refine the scale further by incorporating Toulmin's additional analytical elements—Backing, Qualifier, and Rebuttal—to capture finer gradations of argumentative sophistication across different proficiency levels.

To translate the findings into a practical instructional response, Table 5 presents a proposed four-stage warrant-focused writing instruction framework. The framework is designed to guide EFL writing teachers in helping students move from recognizing claim-data-warrant relationships to independently applying warrant-based reasoning in argumentative essays.

Table 5
Proposed Four-Stage Warrant-Focused Writing Instruction Framework

Stage	Activity Focus	Key Instructional Move	Expected Outcome
1. Deconstruction	Analyzing published texts	Identify and label C-D-W in model essays using Toulmin coding	Develop metalinguistic awareness of warrant function
2. Imitation	Structured warrant writing	Construct warrants for pre-formed C-D pairs across topics	Build procedural schema for inferential reasoning
3. Guided Production	Scaffolded essay drafting	Use warrant-prompting sentence frames; peer W-quality feedback	Transfer warrant construction to extended writing
4. Independent Application	Autonomous argumentation	Full argumentative essays; instructor feedback on W quality	Internalize warrant construction as a writing habit

Note. Adapted from Lam et al. (2018) and Wingate (2020). C = Claim; D = Data; W = Warrant. Framework designed for one 14-week academic writing semester.

CONCLUSION

This study addressed the question of why undergraduate EFL writers at Universitas Islam Makassar struggle to translate their knowledge of facts and opinions into coherent, inferentially grounded academic arguments—and what pedagogical conditions have produced this struggle. The evidence gathered is both clear and convergent. Although the majority of students in the sample could accurately categorize statements as factual or opinion-based when the task was isolated and decontextualized, they proved largely unable to harness this knowledge in the service of extended argumentative writing. The warrant—the logical connector that transforms evidence into argument—was absent from 80% of their essays, not because students lack the cognitive capacity for inferential reasoning, but because they have never received explicit instruction in how to perform it in academic writing.

The three patterns identified in this research—evidence accumulation without interpretive purpose, the equation of academic stance with subjective feeling, and the pervasive omission of logical warrants—are best understood not as isolated writing problems but as symptoms of a deeper pedagogical failure. The instructional systems through which these students have passed have, however unintentionally, rewarded the external markers of academic argumentation—structured paragraphs, cited statistics, hedged assertions—while leaving its cognitive core—explicit inferential reasoning—entirely untaught. Correcting this requires instructional redesign that places the warrant, not the paragraph structure, at the center of academic writing pedagogy.

Toulmin's framework offers a theoretically grounded and practically accessible conceptual vocabulary for such redesign. Its central categories—Claim, Data, and Warrant—are simultaneously rigorous enough to sustain scholarly analysis and transparent enough to be taught to first- and second-year undergraduates without specialized philosophical preparation. The accumulating evidence from EFL research contexts across Asia (Abdollahzadeh et al., 2022; Lam et al., 2018; Rahimi, 2022) affirms that structured, sustained instruction organized around Toulminian argumentation categories yields substantive improvements in the argumentative quality of student writing. This study enriches that evidence base by providing granular documentation of the specific deficit profile that such instruction must target in the South Sulawesi context.

Several considerations limit the conclusions that can be responsibly drawn from this study and indicate directions for future investigation. With 20 participants drawn from a single institution, the findings' applicability to other institutional and regional settings within Indonesia remains to be established empirically. Researchers are encouraged to conduct larger-scale, multi-campus studies that capture the diversity of EFL writing instruction across Indonesian provinces. Longitudinal designs capable of tracking warrant development across an undergraduate program would be especially valuable. Equally important are quasi-experimental or experimental studies that directly test the efficacy of warrant-focused instructional interventions. Cross-disciplinary comparisons—examining how argumentation patterns differ across science, social science, and humanities writing contexts—

would also contribute meaningfully to a fuller understanding of the challenges confronting Indonesian EFL writers as they strive to meet the argumentative demands of university-level scholarship.

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