



Mapping Critical Reading Profiles in Undergraduate Research Proposals: A Study of Final-Year Psychology Students at UIN Maulana Malik Ibrahim Malang

(Pemetaan Profil Kemampuan Membaca Kritis dalam Proposal Skripsi Mahasiswa Psikologi Semester Akhir di UIN Maulana Malik Ibrahim Malang)

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Received: 21 April 2026

Revised: 06 July 2026

Accepted: 10 July 2026

Abstract

Although previous studies have examined critical reading primarily through tests, self-reports, and instructional interventions, limited research has explored how critical reading is manifested in undergraduate research proposals. Furthermore, little is known about the reading behaviors that underpin students' critical engagement with scholarly sources. Drawing on Wang and Gierl's (2011) conceptualisation of critical reading as a higher-order cognitive process, complemented by Paul and Elder's (2007) critical thinking framework, this study investigates critical reading skills and associated reading behaviors reflected in undergraduate research proposals. A qualitative content analysis was conducted on 30 undergraduate research proposals submitted by final-year psychology students at a public university in Malang, Indonesia. Participants were purposively selected from students who had completed their thesis proposal examinations during the 2021–2022 academic year. To enhance methodological triangulation, semi-structured interviews were conducted with 10 participants whose proposals were included in the analysis. The findings revealed two major patterns. First, students demonstrated relatively strong interpretive skills, particularly in identifying relevant sources and understanding explicit textual meaning. However, higher-order critical reading skills, including argument analysis, evaluation of conflicting evidence, inference, and synthesis, remained underdeveloped. Second, students seldom employed strategic reading behaviors such as note-taking, re-reading, cross-textual comparison, thematic organization, or visual mapping to support critical engagement with scholarly literature. These findings challenge the assumption that effective source use necessarily reflects well-developed critical reading competence. By linking textual evidence with students' reported reading behaviors, this study offers a more comprehensive understanding of critical reading in academic writing and highlights the need for explicit instruction, structured scaffolding, and targeted supervisory feedback to foster higher-order academic literacy.

Keywords: academic literacy; content analysis; critical reading skills; research proposals; undergraduate writing

Abstrak

Meskipun berbagai penelitian sebelumnya telah mengkaji membaca kritis melalui tes, laporan, dan intervensi pembelajaran, masih sedikit penelitian yang mengeksplorasi bagaimana kemampuan tersebut tercermin dalam proposal skripsi. Selain itu, perilaku membaca yang mendasari keterlibatan kritis mahasiswa terhadap sumber-sumber ilmiah juga belum banyak dipahami. Berlandaskan konseptualisasi membaca kritis sebagai proses kognitif tingkat tinggi yang dikemukakan oleh Wang dan Gierl (2011), serta didukung oleh kerangka berpikir kritis dari Paul dan Elder (2007), penelitian ini bertujuan mengidentifikasi keterampilan membaca kritis dan perilaku membaca yang tercermin dalam proposal penelitian mahasiswa. Penelitian ini menggunakan pendekatan kualitatif dengan metode analisis isi terhadap 30 proposal penelitian skripsi mahasiswa Psikologi semester akhir di sebuah perguruan tinggi negeri di Malang, Indonesia. Partisipan dipilih secara purposif, yaitu mahasiswa yang telah menyelesaikan ujian proposal skripsi pada tahun akademik 2021–2022. Untuk memperkuat triangulasi data, dilakukan wawancara semi-terstruktur terhadap 10 mahasiswa yang proposalnya dianalisis. Hasil penelitian menunjukkan dua temuan utama. Pertama, mahasiswa menunjukkan kemampuan yang relatif baik dalam menginterpretasikan informasi, terutama dalam mengidentifikasi sumber yang relevan dan memahami makna eksplisit dari bacaan. Namun, keterampilan membaca kritis tingkat tinggi, seperti menganalisis argumen, mengevaluasi bukti yang saling bertentangan, menarik inferensi, dan menyintesis informasi, masih belum berkembang secara optimal. Kedua, mahasiswa jarang menerapkan strategi membaca yang mendukung keterlibatan kritis terhadap literatur ilmiah, seperti membuat catatan, membaca ulang, membandingkan informasi antar sumber, mengorganisasi tema, dan memvisualisasikan hubungan antarkajian. Temuan ini menunjukkan bahwa kemampuan menggunakan sumber rujukan secara efektif belum tentu mencerminkan kemampuan membaca kritis yang matang. Dengan menghubungkan bukti tekstual dalam proposal penelitian dengan perilaku membaca yang dilaporkan mahasiswa, penelitian ini memberikan pemahaman yang lebih komprehensif mengenai praktik membaca kritis dalam penulisan akademik serta menegaskan pentingnya pembelajaran membaca kritis yang eksplisit, scaffolding yang terstruktur, dan umpan balik pembimbing yang terarah untuk mengembangkan literasi akademik tingkat tinggi.

Kata Kunci: analisis isi; literasi akademik; keterampilan membaca kritis; penulisan akademik; proposal penelitian.

INTRODUCTION

The thesis proposal constitutes a critical milestone in undergraduate academic development, serving as the foundational framework through which students demonstrate their capacity for systematic scientific inquiry. Beyond its procedural function, the proposal requires students to engage deeply with existing literature, construct coherent arguments, and position their research within a broader scholarly conversation. Such demands presuppose a well-developed set of academic literacy skills, among which critical reading occupies a central role (Faznur et al., 2026; Yamin & Purwati, 2020). Critical reading is not merely a preliminary activity before writing; it is an active, recursive process through which students interrogate sources, evaluate evidence, and generate informed perspectives that ultimately shape the quality of their academic work.

Critical reading is fundamentally intertwined with critical thinking. Defined as a reading process that necessitates the active deployment of higher-order cognitive operations, critical reading requires readers to analyze, synthesize, and evaluate textual information rather than passively absorbing it (Kohzadi et al., 2014). Paul and Elder (2007) conceptualize critical reading as a disciplined process of analysing arguments, evaluating evidence, identifying assumptions, making inferences, and engaging in reflective judgment. This framework provides a systematic lens for understanding how readers critically engage with academic texts and forms the theoretical foundation of the present study. Wang and Gierl (2011) further characterize critical reading as the

deliberate use of higher-level skills to analyze, modify, and evaluate reading material. This perspective aligns with broader frameworks of higher-order thinking that emphasize students' capacity to analyze effectively, evaluate information to draw reasoned conclusions, and generate novel ideas or solutions from what they read (Chinedu et al., 2015; Syaputra et al., 2026). Drawing on these complementary perspectives, this study employs Paul and Elder's (2007) framework, supported by Wang and Gierl's (2011) conception of higher-order cognitive processes, to guide the identification and interpretation of critical reading behaviours in undergraduate research proposals. Collectively, these perspectives establish that critical reading is not a passive reception of text but an active intellectual engagement that drives academic knowledge construction.

The relationship between critical reading and critical thinking is mutually reinforcing. Critical thinking serves as the cognitive mechanism through which readers unify and deepen their understanding of texts (James & Selvam, 2024; Paige et al., 2024). In this process, readers do not merely decode meaning; they evaluate arguments, identify underlying assumptions, draw inferences, and interpret texts from an informed personal standpoint (Paul & Elder, 2007). Crucially, this process is bidirectional: understanding one's own reasoning is strengthened by engaging with the logic of others, and vice versa (Ozensoy, 2021). This reciprocity is further evidenced when readers encounter logically inconsistent or intellectually irresponsible statements in a text. A moment of critical thinking that prompts re-reading and deeper comprehension, thereby activating critical reading (Galadima & Babayo, 2022). Empirical evidence supports this relationship, suggesting that stronger critical reading skills are associated with higher levels of critical thinking. Together, these perspectives establish critical reading as both a manifestation of and a catalyst for critical thinking in academic contexts.

Research on critical reading in higher education has developed in three main focuses. First, studies that focus on measuring students' critical reading abilities through tests or standardised assessment instruments show that students generally have difficulty analysing arguments, evaluating evidence, and drawing text-based conclusions (Wang & Gierl, 2011; Kohzadi et al., 2019). Second, several studies evaluate the effectiveness of learning interventions to improve critical reading skills, such as the critical literacy approach, collaborative reading, and metacognitive strategies (El-Maghraby, 2023; Van et al., 2022). Research results show that critical reading skills can be improved through structured scaffolding and reflective activities. Third, research has begun to link critical reading with academic literacy and the quality of students' academic writing (Castillo-Martínez & Ramírez-Montoya, 2021a; Grabe & Zhang, 2016; Nabila et al., 2024). These findings indicate that the ability to evaluate and synthesise information is an important foundation in producing argumentative and evidence-based academic writing.

Although previous research has identified various difficulties students face in critical reading and evaluated the effectiveness of learning interventions, most studies measure critical reading skills through tests, questionnaires, or classroom activities. Thus, there is still little empirical evidence showing how critical reading skills are truly manifested in authentic academic products, particularly undergraduate research proposals. Moreover, the relationship between the quality of critical reading skills reflected in the text and the underlying reading behaviour is still rarely examined. This gap is important because research proposals are a form of academic writing that require students not only to understand sources but also to critically evaluate, compare, and synthesise various research perspectives.

Unlike previous research that focused on measuring critical reading skills or the effectiveness of learning interventions, this study analyses research proposals as an authentic representation of students' critical reading practices. This study also integrates document analysis with student interviews to uncover the relationship between critical reading skills evident in the text and the reading behaviours underlying them. Thus, this research offers a more comprehensive understanding of how critical reading is manifested in academic writing and the behavioural factors that can hinder the development of high-level literacy skills. Based on these gaps, this study aims to map the patterns of critical reading skills and reading behaviours reflected in undergraduate students' research proposals and to identify areas that require pedagogical support to enhance the quality of academic literacy and scientific writing.

RESEARCH METHOD

Research Design

This study employed a qualitative research design with content analysis as the primary methodological framework. This approach was selected on the grounds that it enables systematic, replicable, and rigorous examination of textual data, allowing the researcher to identify both explicit and implicit patterns of critical reading skills embedded within students' academic writing (Krippendorff, 2019). Content analysis is particularly well-suited to this inquiry because it facilitates the transformation of qualitative textual evidence into structured, interpretable categories without reducing the richness of the underlying data (Mayring, 2014).

Research Setting and Participants

The study was conducted at a public university in Malang, East Java, Indonesia. Participants were selected through purposive sampling based on two criteria: (1) completion of the undergraduate thesis proposal examination and (2) enrollment in either the first or second cohort of the thesis proposal examination in the even semester of the 2021–2022 academic year. The final sample comprised 30 undergraduate students whose thesis proposal documents served as the primary data source. A total of 30 thesis proposal documents were selected as the primary data sources because all of them met the established inclusion criteria and provided relevant information for identifying and mapping critical reading profiles through content analysis. This number allowed the researcher to capture a variety of critical reading behavior characteristics while conducting in-depth coding and analysis of each document.

To triangulate the documentary findings, semi-structured interviews were subsequently conducted with 10 students drawn from the same sample pool, selected based on their proposals containing analytically rich and varied evidence of critical reading behaviors. Participants were selected based on proposals that demonstrated a variety of critical reading characteristics so that they could provide a more in-depth explanation of the document analysis findings. This number was deemed sufficient because the purpose of the interviews was not to generate new themes but rather to confirm, clarify, and enrich the interpretation of the content analysis results. All participants provided written informed consent before data collection, and the anonymity of all proposal documents was strictly maintained throughout the study.

Data Sources and Collection

Two complementary data sources were employed. First, 30 thesis proposal documents were obtained from the academic office of the relevant faculty. These documents constituted the primary corpus for content analysis, with the introduction, literature review, and methodology sections designated as the units of analysis, given that these sections most directly reflect students' engagement with academic sources. Second, semi-structured interview data were collected from 10 students to capture critical reading behaviors that were not readily discernible from textual analysis alone, including cognitive strategies such as skimming, keyword selection, source synthesis, re-reading, and cross-textual comparison. All interview sessions were audio-recorded, transcribed verbatim, and subsequently cleaned to remove content irrelevant to the research focus.

Data Analysis

The data analysis procedure was structured in accordance with (Creswell, 2012) six-step qualitative analysis framework, integrating both deductive and inductive analytical approaches to ensure theoretical rigor and empirical sensitivity.

For the proposal documents, deductive content analysis was applied using a pre-established analytical matrix grounded in Facione (2011) critical thinking framework, which encompasses six core skills: interpretation, analysis, evaluation, inference, explanation, and self-regulation. Given the scope of this study, four skills: interpretation, analysis, evaluation, and inference, were operationalized as the primary analytical categories. Supporting sub-skill indicators were adapted from Firman (2015) and Sultan (2018) to ensure contextual relevance within the Indonesian academic writing setting. Each indicator was assessed according to its presence or absence within each designated proposal section, and the frequency of occurrence was recorded systematically.

To enhance analytical consistency, the coding process was conducted in multiple cycles. After the initial coding, all proposal documents were re-coded two weeks later using the same analytical matrix. The coding outcomes were then compared to identify inconsistencies and refine category definitions. Detailed coding memos and decision logs were maintained throughout the analysis to provide a transparent audit trail and support the dependability of the findings.

The level of critical reading skill demonstrated by students was determined using a percentage-based classification system: High ($\geq 70\%$ of students demonstrating the indicator), Moderate (40–69%), and Low ($< 40\%$). This classification enabled a communicative and comparative depiction of skill distribution across the sample. Findings were presented through both descriptive narratives and thematic frequency tables, allowing for cross-sectional visualization of how specific critical reading indicators manifested across different proposal sections.

For the interview data, an inductive thematic analysis approach was employed, following the procedures outlined by Braun and Clarke (2006). This process involved iterative reading of transcripts, open coding of recurring behavioral patterns, and the progressive clustering of codes into overarching themes related to students' critical reading behaviors and strategies. The inductive analysis was designed to surface dimensions of critical reading, including affective, motivational, and metacognitive aspects that are not captured by document analysis alone. A coding manual containing operational definitions, inclusion criteria, exclusion criteria, and representative examples

for each indicator was developed prior to analysis to ensure consistency throughout the coding process.

Trustworthiness and Research Ethics

The credibility and trustworthiness of the findings were established through methodological triangulation between proposal documents and interview data, peer debriefing with two colleagues experienced in academic literacy research, and prolonged engagement with the data through repeated reading and coding cycles. To enhance dependability and confirmability, an audit trail was maintained throughout the study, documenting coding procedures, analytical memos, category refinements, and key methodological decisions. These procedures enabled transparency in the analytical process and minimized potential researcher bias (Lincoln et al., 1985)

Research ethics were upheld in accordance with standard academic research protocols. All proposal documents were fully anonymized before analysis and were used exclusively for scholarly purposes. Each interview participant was provided with a written informed consent form detailing the study's objectives, procedures, potential benefits, and their unconditional right to withdraw from participation at any point without academic consequence.

RESULTS

Based on the results of the analysis, critical reading is divided into skills of interpreting, analyzing, inferring, and evaluating. Table 2. shows the following research findings.

Table 2. Content analysis of students' critical reading descriptions in thesis proposals

Skills	Sub-skills	Indicator	Evidence	Level
interpreting	categorize	Identify reading sources (references) that are appropriate/relevant to the research topic	Reference	High (83%)
		Classifying the quality of reading resources	Reference citation	Low (13%)
		Formulate, and describe a certain situation, belief, or point of view	introduction	High (73%)
	Describe the meaning of	Identify the language choices (vocabulary/sentence) that describe the text's goals, values, or views	all	High (87%)
		Explanations contained in certain language choices in texts that contain certain views, values, and goals	all	Low (20%)
		Assessing ideas according to their importance and relevance to the	Introduction	Moderate (60%)
	classify meaning			

Skills	Sub-skills	Indicator	Evidence	Level
		topic/problem (the author's argument in describing the problem is relevant to the topic)	Literature review	High (80%)
			method	Low (27%)
analyze	detect ideas	Describe interesting purposes, values, and views in the text.	Literature review	High (100%)
		Compare or contrast ideas, concepts or statements;	Introduction	Low (13%)
		Identify issues or problems	Literature review	Low (27%)
Inference	Considering the evidence	Formulate information that supports the statement	Introduction	Moderate (45%)
		Finding relative facts, problem facts that support the problems in the introduction	Introduction	Low (24%)
	propose an alternative	Assess relevant information by determining acceptability (acceptability)	Introduction	Low (40%)
			Literature review	Moderate (50%)
		Formulate alternatives for problem-solving.	Literature review	High (67%)
			Introduction	Moderate (53%)
		Projecting possible consequences, policies, or beliefs. determine the weakness of an idea in a text	Method	High (67%)
			Introduction Discussion	Low (0%)
evaluate	assess claims	Provides a point of view that is opposite of the information being read	Introduction	Low (0%)
			Literature review	Low (40%)
		Assessing the credibility of information/references/opinions	reference	Low (0%)
		Assess the importance of the supporting arguments	High (63%)	
			Introduction	Low (20%)
			Literature review	High (73%)
		Assess the factors that influence the emergence of certain views/claims..	Method	High (83%)
			Introduction	Low (23%)
			Literature review	Low (10%)
		Determine the strength of an idea in a text..	Introduction	Low (20%)

Tabel 2 show that content analysis of student thesis proposals revealed that critical reading skills were most evident in interpretation, with the majority of students capable of identifying pertinent reading sources and comprehending the explicit meaning of the text. However, they continued to struggle with elucidating latent meanings, evaluating the quality of sources, and correlating thoughts to the study setting. This indicates that pupils possess strong literal and

conceptual understanding; nonetheless, their reflective and critical reasoning abilities remain constrained.

On the other hand, the competencies of analysis, inference, and evaluation were mainly categorized as poor to moderate. Students were able to make limited comparisons of arguments between studies, make logical inferences from the literature and identify gaps in arguments made in the literature, and evaluate the credibility and strength of the evidence provided in support of arguments. No student could predict consequences of earlier results or critically analyse the weaknesses of published arguments.

These findings suggest that advanced critical thinking skills, particularly in evaluative and inferential areas, must be cultivated through education that prioritizes argumentative analysis and critical reflection on scholarly materials. Argument analysis involves analysing the logic and structure of arguments found in different sources, comparing the evidence used for those arguments, identifying inconsistencies in arguments and explaining why certain arguments are more persuasive and appropriate than others. Students need to assess the quality and coherence of arguments and then place their own research in the context of earlier studies, not just summarise the studies. Critical reflection, on the other hand, involves students' ability to criticize assumptions in earlier studies, to connect the scholarly evidence to the research context, to identify areas of limitations of existing knowledge and to make informed inferences that result in the identification of meaningful research gaps. Acquiring these skills would allow students to transition from descriptive literature reviews to more analytical and research-informed academic writing.

Table 2. Thematic Analysis of Emerging Critical Reading Behavior Patterns

Code Aspect Findings	Transcript	Interpretation
skimming	Ketika menelusur sumber informasi ya saya melihat judul relevan atau tidak (R1/PMK/MS06/NS1) Saya melihat judul dulu selanjutnya abstrak, kalau ada satu variable yang sama, biasanya tetap saya baca untuk melihat definisi Saya melihat judul kalau sesuai dengan judul skripsi saya, lalu melihat tinjauan pustaka di pendahuluan artikel ya kalau kata kunci variable sesuai saya biasanya melihat	Students read sources of information that are relevant to the research title. Students skim the title, abstract
View formulas, tables, pictures, graphs	Apabila pendekatan dan metode penelitian yang digunakan sama, saya melihat rumusnya untuk diterapkan dipenelitian saya kalau penelitian kuantitatif saya melihat pada Teknik/ uji variabelnya Saya melihat table instrument dari sumber referensi skripsi untuk membantu saya Menyusun instrumen	Students see formulas to help choose test techniques, determine research samples, and see tables in information sources to develop instruments
Considering the author/year of publication/source of the text	Kalau mencari referensi saya lebih banyak ke skripsi yang sesuai dengan judul saya, soalnya kalau artikel banyak yang membahas satu variable, Dosen pembimbing saya tidak mengomentari tahun publikasi referensi 10 tahun terakhir,	Students consider many text sources from theses, articles, and ebooks. Consideration of the year of publication of the actual reference is suggested during the proposal seminar

Code Aspect Findings	Transcript	Interpretation
	Ketika seminar proposal saya diingatkan referensi harus banyak dari hasil penelitian dan Saya mempertimbangkan sumber teks yang relevan, seperti skripsi, artikel. kalau tahun publikasi selama referensinya sesuai dengan judul saya gunakan. Saya tidak melihat pertimbangan kredibilitas penulis	Students do not consider the credibility of the author
Choose/Search for keywords	Saya biasanya mencari referensi dng kata kunci judul lengkap saya terlebih dahulu, baru apabila cari definisi saya mencari kata kunci sesuai variable, saya tidak tau penelusuran boolean Saya mencari dengan kata kunci huBungan dua variable saya, baru mencari definisi dari setiap variabel Saya tidak tahu penelusuran boolean, apaitu Bu? Oh ya saya menggunakan kata “dan” untuk melihat hub dua variabel	Students do not understand keyword searches using Boolean searches looking for references with the same thesis title
Connect two or more ideas from text	Ya saya biasanya menghuBungan dua atau lebih sumber informasi dalam pencarian definisi Dosen pembimbing saya menyarankan saya untuk membandingkan dua penelitian terdahulu	Students connect two or more ideas from the text to be included in previous research and literature reviews related to the definitions of several expert views.
apply information from text	Hasil nya ada di kutipan-kutipan proposal skripsi Informasi yang saya baca membantu saya menentukan pertanyaan penelitian, menggunakan pendekatan penelitian, membantu untuk menyusun instrumen	The information read is used to support arguments and determine the research approach and the preparation of the research scale
Solve new problems with information from text	Kalau membaca skripsi kakak tingkat juga menentukan apakah variable yang saya gunakan bisa digunakan	Sources of information can determine the relevance of research variables
Make a connection through the matrix/ research flowchart and the relationship between the two variables	Dosen saya menyarankan untuk memBuat alur dan hubungan variable penelitian Ketika seminar proposal, penguji menarakan untuk memBuat matrik penelitian terdahulu	Students make connections from information sources based on advice obtained during consultations and sessions
Answer the question	Ya referensi yang saya dapat membantu saya untuk penyusunan skala penelitian Ya referensi yang say abaca membantu menentukan tujuan/ pertanyaan penelitian	Sources of information read can help students compile compose research questions and determine the scale of the research
Defines the purpose of the text	Ya biasanya kl menemukan informasi yang saya, saya sudah menetapkan tujuan untuk mendukung permasalahan saya di lapangan Tujuannya biasanya untuk membuat judul dan saya masukkan kutipan	The information read can be used in finding research titles, and supporting arguments contained in citations

Thematic Analysis of Absent Critical Reading Behaviors

A thematic analysis of the interview data revealed a consistent absence of several higher-order critical reading behaviors among students during the drafting of research proposals. Seven key behavioral codes were identified as missing, particularly those related to metacognitive annotation, comparative reasoning, peer-mediated discussion, and evaluative engagement with the text. Notably, students did not demonstrate the ability to compare different perspectives or evaluate conflicting evidence critically. Instead, they selectively used sources that aligned with arguments they had previously established, treating prior studies as reinforcing references rather than as objects of critical examination. This one-sided engagement reflects a limited epistemic stance, in which knowledge is reproduced rather than questioned. Such patterns indicate a reliance on surface-level reading strategies, which limit the development of the analytical and synthetic thinking required in academic writing.

Table 3. Thematic analysis of student behaviour patterns that do not appear during critical reading in preparing thesis proposal

Code Aspect Findings	Transcript	Interpretation
reviewing contrasting perspectives of opposites	Tidak Bu hanya informasi yang sejalan dan relevan saja	Students do not examine or compare contrasting/different ideas; only ideas cited are in line with the argument.
comparing different ideas from the text	Saya belum menemukan hasil yang berlawanan Saya belum melakukan sejauh itu bu	
making notes	Ribet Bu Biasanya hanya saya kumpulkan kutipan2 yang relevan Bu langsung di file proposal Bu. Kalau memberi anotasi setiap referensi yang saya baca tidak Saya tidak memberi warna pada kutipan penting setiap referensi yang saya baca, langsung saya kutip dalam proposal saya Bu	Students do not take notes, important colour information, annotate or underline
discussing the text with others	Saya tidak Bu Ya saya diskusinya saat proposal skripsi saya konsultasi ke dosen pembimbing	Students discuss sources of information when conducting guidance to lecturers. Not during critical reading
challenging conclusions	Saya menyimpulkan dari hasil penelitian terdahulu yang relevan dengan penelitian saya, kalau menentang kesimpulan tidak	Sources of information that are concluded only as supporting arguments
identifying common factors across different situations or images	Tidak saya lakukan Bu Sepertinya tidak Bu	Students do not identify common factors across different situations or images
organizing/visualizing information (graphics)	Tidak Bu Grafik...hasil presentase yang saya baca Bu tapi tidak saya masukkan grafiknya ke pendahuluan hanya presentase saja	Students do not visualize information in graphs to support arguments.
re-reading the text	Tidak Bu, saya biasanya tidak mengulang referensi yang saya baca Ndak Bu, kalau sampai baca dua kali referensi yang sama	Students do not repeat the references they read.

Furthermore, the absence of active reading strategies further reinforces this pattern of passive knowledge extraction. Students do not engage in annotation practices such as note-taking,

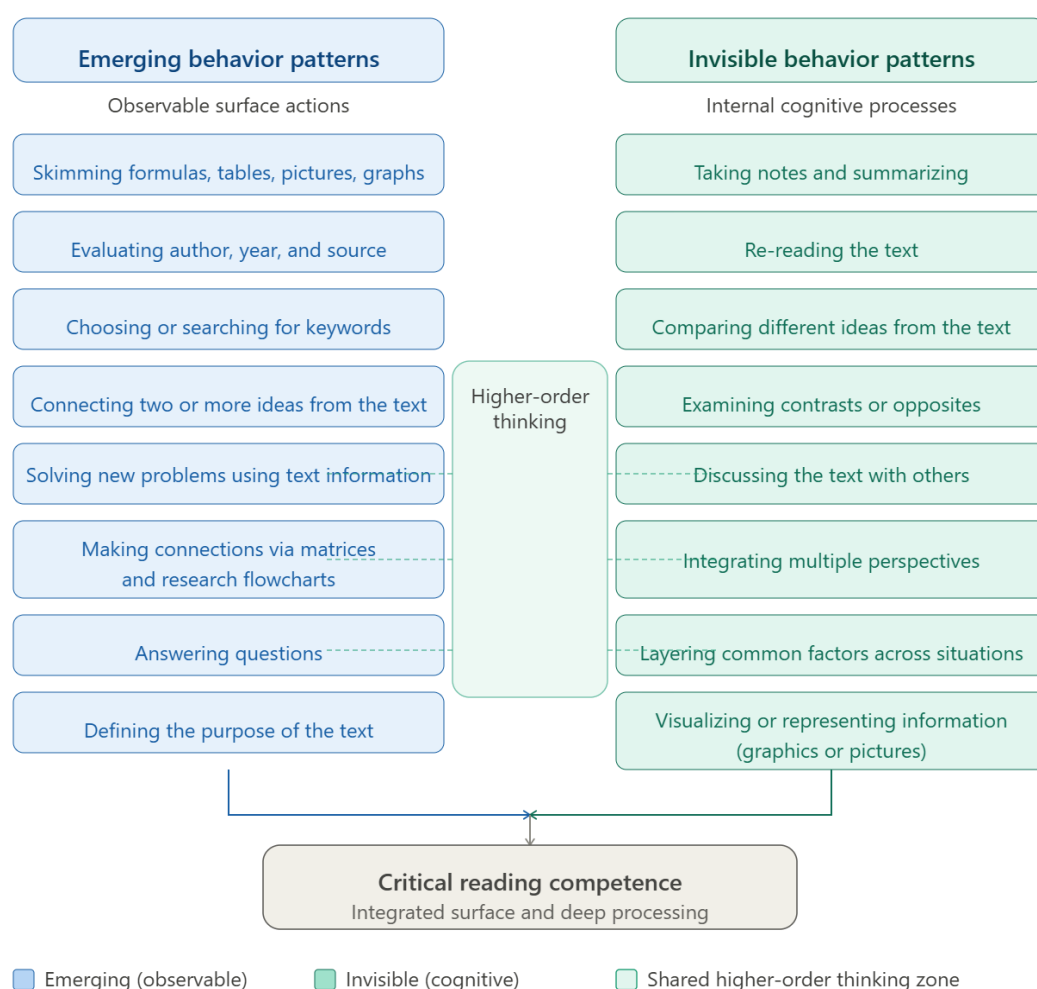
highlighting, or rereading, nor do they participate in peer discussions that could facilitate dialogic meaning-making. Reading is approached as a linear and procedural activity, focused on extracting quotations rather than building understanding. Furthermore, students do not engage in cross-contextual analysis or transform data into visual representations, thereby limiting their ability to identify patterns and strengthen arguments. Collectively, these missing behaviors indicate that critical reading practices have not been internalized as part of students' academic repertoire. Consequently, this gap highlights the need for structured pedagogical interventions to promote active, analytical, and socially mediated reading practices in the context of higher education. Higher education teaching should therefore break away from merely helping students find literature and clearly nurture critical reading skills by using formal teaching methods, such as comparing arguments, guided analysis of conflicting evidence, reflective annotation, joint discussion, and visual arrangement of arguments. These strategies can help students develop critical reading as an active process of knowledge construction rather than mere information gathering. They can also foster deeper analytical engagement with scholarly literature and strengthen students' ability to produce evidence-based academic writing.

DISCUSSION

The present findings extend current understandings of critical reading in higher education by demonstrating that students' difficulties in research proposal writing are not merely located at the level of isolated cognitive skills, but are embedded in the absence of integration between interpretation, evaluation, and synthesis processes. While prior research has often treated analysis, inference, and evaluation as discrete components of critical reading (Din, 2020; Wilson, 2016), this study shows that these components do not automatically function as an interconnected system in authentic academic writing contexts. Instead, students tend to demonstrate fragmented engagement with texts, where surface-level evaluation of sources coexists with limited development of higher-order reasoning.

This finding partially aligns with existing literature that emphasizes the role of synthesis and evaluative judgment in academic literacy (Burgos-Videla et al., 2025; Castillo-Martínez & Ramírez-Montoya, 2021). However, it also extends this body of work by revealing a critical inconsistency: students may appear competent in assessing source credibility and relevance, yet simultaneously struggle to engage in cross-textual reasoning and argumentative integration. This challenges the implicit assumption in previous studies that the ability to evaluate individual sources necessarily reflects the presence of advanced critical literacy.

Figure 1 presents a dual-pathway framework of students' critical reading behaviors, distinguishing between emerging surface-level actions and invisible cognitive processes that contribute to higher-order reading competence



Note. Dashed lines indicate the intersection of both pathways at the higher-order thinking level.

Figur 1
A dual-pathway framework of students' critical reading behaviors

The behavioral categories mapped in Figure 1 further illustrate that students' reading practices are distributed across specific functional clusters within each pathway. Within the emerging pathway, behaviors such as identifying keywords, evaluating bibliographic information, and connecting limited ideas primarily serve information filtering and surface comprehension functions. In contrast, invisible-pathway behaviors including cross-textual comparison, re-reading, synthesis of multiple perspectives, and visualization of information function as mechanisms for knowledge construction and conceptual restructuring. Notably, higher-order behaviors such as solving new problems using textual information, defining textual purpose, and integrating ideas through matrices represent convergence points between the two pathways, yet these remain inconsistently demonstrated. This pattern indicates that the transition from surface processing to integrated critical reading competence is structurally incomplete.

The dual-pathway framework proposed in this study further complicates linear models of reading development. Unlike traditional cognitive models that assume progressive movement from comprehension to higher-order thinking (Anderson & Krathwohl, 2001), the findings suggest a non-linear and uneven developmental pattern. Students predominantly operate within the "emerging pathway," characterized by surface-level strategies such as keyword identification and

selective reading. However, these behaviors rarely transition into the “invisible pathway,” which involves deeper interpretive actions such as re-reading, comparative analysis, and multi-perspective integration. This asymmetry indicates that exposure to academic texts alone is insufficient to trigger the development of critical reading competence.

Importantly, the gap between these pathways does not only reflect a cognitive deficiency but also suggests an epistemic limitation. Students appear to approach texts primarily as sources of information rather than as objects of critique, dialogue, and knowledge construction. This aligns with Burgos-Videla et al. (2025) and Tommasi et al. (2023) who argue that many learners remain at the level of information consumption without transitioning toward knowledge transformation. In this sense, the absence of invisible-pathway behaviors reflects not only limited skill, but also underdeveloped academic reading orientation.

Within this framework, inference-making emerges as one of the weakest components. Consistent with (Elbro & Buch-Iversen, 2013; Elleman, 2017; McNamara, 2021; Peng et al., 2024), inference requires deep, constructive processing that integrates prior knowledge with textual cues. However, the present findings indicate that students rarely engage in such processing unless explicitly guided. This suggests that inference should not be treated as a natural by-product of reading exposure, but as a strategically developed competence supported by sustained instructional intervention (Barth et al., 2024; Olifant, 2024; Spörer et al., 2009).

Similarly, students’ limited ability to evaluate conflicting information highlights a critical weakness in argumentative literacy. As Paul & Elder (2007) argue, critical reading requires the capacity to interrogate assumptions and evaluate competing claims. Yet in this study, students frequently accepted source claims without engaging in comparative judgment. This finding resonates with Wallace (2003) who emphasizes that institutional constraints such as limited instructional time and large class sizes often restrict opportunities for deep critical engagement with texts.

From a pedagogical perspective, these findings suggest that critical reading instruction should move beyond strategy teaching toward epistemic scaffolding. Rather than focusing solely on procedural skills, instruction should explicitly cultivate students’ understanding of reading as a dialogic process involving interaction among texts, perspectives, and disciplinary arguments. Javorčíková et al. (2021) similarly emphasize that without explicit integration of critical thinking and academic reading instruction, students are unlikely to achieve higher-order literacy competence.

The dual-pathway model further implies that effective pedagogy must target both observable and invisible reading behaviors. While surface-level strategies such as keyword identification may support initial comprehension, they are insufficient for academic knowledge construction unless complemented by practices such as re-reading, comparative analysis, and collaborative interpretation. Embedding such practices into instruction, as suggested by (DiYanni, 2017) and Hromova et al. (2022) may help bridge the gap between the two pathways and support students’ progression toward integrated critical reading competence.

Finally, contextual factors also play a significant role in shaping these patterns. Institutional learning environments, pedagogical traditions, and students’ reading habits collectively influence how critical reading develops across both pathways. As Nambiar et al., (2020) and Platt (2018)

demonstrate, instructional design that incorporates culturally responsive texts and sustained reading engagement can significantly improve students' motivation and critical reading performance. Therefore, future research should investigate how contextual and instructional variables interact with cognitive and behavioral dimensions of critical reading development across diverse educational settings.

CONCLUSION

This study demonstrates that students' critical reading skills in research proposal writing are unevenly developed. While students show relatively strong competence in interpreting and evaluating information sources, particularly in assessing the credibility and relevance of references in literature reviews, their higher-order critical reading skills, including analyzing arguments, drawing inferences, and evaluating conflicting evidence, remain underdeveloped.

From a theoretical perspective, these findings contribute to academic literacy scholarship by highlighting that successful source identification and citation practices do not necessarily indicate well-developed critical reading competence. The study extends existing frameworks by showing that critical reading in academic writing is not only a cognitive skill set but also a behavioral practice shaped by limited engagement with comparative reading, synthesis, and multi-perspective reasoning.

Practically, the findings suggest that developing students' critical reading abilities requires more than incidental exposure to academic texts. Structured pedagogical interventions, such as guided reading tasks, explicit instruction in critical reading strategies, and sustained supervisory feedback, are essential. These skills must be cultivated through consistent practice and methodically included into the instruction of academic writing, rather than seen as discrete learning outcomes.

This study has several limitations. First, the sample was limited to students from one faculty and two cohorts, which may restrict the transferability of the findings to other contexts. Second, the data were derived from research proposal documents and semi-structured interviews, without direct observation of real-time reading processes, which may limit the depth of behavioral interpretation. Third, the qualitative content analysis approach does not provide quantification of the intensity or frequency of critical reading behaviors beyond categorical classification.

Future studies are recommended to employ methodological triangulation that includes classroom observation or think-aloud protocols to capture real-time critical reading processes. In addition, integrating quantitative instruments such as standardized critical thinking or reading assessments could strengthen the robustness of findings. Expanding the participant pool across multiple universities and disciplinary contexts would also improve the generalizability and comparative insight of critical reading development in higher education.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to the institution and all parties who contributed to the completion of this study. The authors would like to thank all participants who willingly contributed their time and insights during data collection. Their participation was

essential to the successful completion of this study. The authors also appreciate the support of colleagues and research assistants who contributed to data organization and analysis.

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