CONFIDENT BUT CAUTIOUS: EFL THESIS WRITERS' AFFECTIVE, BEHAVIORAL, AND COGNITIVE PERCEPTIONS OF AI WRITING TOOLS IN AN INDONESIAN ISLAMIC UNIVERSITY

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Abstract

Artificial intelligence (AI) writing tools such as ChatGPT, Grammarly, and QuillBot are now part of how many English as a Foreign Language (EFL) students write their undergraduate theses. Yet it is unclear whether students' enthusiasm for these tools is matched by a critical view of what the tools can and cannot do. This quantitative survey examined how 30 students from the 2021 cohort of an English Education Department at UIN Alauddin Makassar, Indonesia, appraised AI tools in thesis writing through the affective, behavioral, and cognitive (ABC) lenses. Data were collected with a 20-item, 5-point Likert questionnaire (affective: 7 items; behavioral: 6; cognitive: 7) and analyzed descriptively in SPSS. Means were interpreted with equal-interval bands for a 5-point scale. All three dimensions fell in the "Agree" range (mean item scores: behavioral 3.58, affective 3.51, cognitive 3.45), but their 95% confidence intervals overlapped and extended into the "Uncertain" range, so the dimensions should not be ranked. The most strongly endorsed items were using AI to paraphrase or summarize complex texts (3.77), feeling confident using AI tools (3.73), and acknowledging that AI still has limitations (3.73). Five items, including the reliability of AI-generated content and gains in critical thinking (both 3.30), fell in the "Uncertain" range. Students therefore appear to be confident users who remain cautious about accuracy and cognitive benefit, and the wide spread of total scores shows that views were not uniform. The paper discusses implications for AI literacy, transparent AI use, and academic integrity in thesis supervision.

Keywords: ABC Model, Academic Integrity, AI Literacy, EFL, Generative AI, Student Perceptions, Thesis Writing

INTRODUCTION

AI has moved quickly from a specialist technology to an everyday academic resource. Reviews of the field describe a steady growth of AI applications in higher education and a parallel debate about their benefits and risks (Crompton & Burke, 2023; Kasneci et al., 2023). In second-language writing, large language models can generate ideas, rephrase sentences, and give immediate feedback, but they also raise concerns about accuracy, overreliance, and the authenticity of student work (Barrot, 2023; Kohnke et al., 2023). Systematic evidence on ChatGPT as a writing assistant in higher education points in the same direction: clear potential, accompanied by pedagogical and ethical questions (Imran & Almusharraf, 2023).

Students themselves appear to have moved faster than policy. In a survey of 399 undergraduate and postgraduate students in Hong Kong, Chan and Hu (2023) found that students were generally willing to use generative AI and valued its support for writing, brainstorming, and personalized feedback, yet they also voiced concerns about accuracy, privacy, ethics, and the effect of AI on their personal development. International guidance now recommends a human-centered approach in which learners are taught to use generative AI critically and transparently rather than being simply allowed or forbidden to use it (Miao & Holmes, 2023). In Indonesia, the Directorate General of Higher Education, Research, and Technology launched national guidelines on generative AI in higher-education learning in October 2024, emphasizing ethical and responsible use (Direktorat Jenderal Pendidikan Tinggi, Riset, dan Teknologi, 2024).

The thesis is a particularly demanding test of these tools. Undergraduate EFL writers must produce an extended, formally structured text in a language they are still developing, usually under time pressure. Indonesian studies suggest that students turn to AI tools in precisely this situation. Zuhriah et al. (2024) found that final-year EFL students valued Grammarly's instant feedback and ease of use when writing their theses, while also reporting overreliance, the need to recheck suggestions manually, and the limits of the free version. Selly et al. (2025) surveyed students' use of AI in English essay writing and reported positive familiarity and perceived usefulness alongside concerns about coherence, plagiarism, and unstable internet connections, with overall perceptions characterized as moderate. Baskara and Mukarto (2023) likewise discussed the implications of ChatGPT for language learning in Indonesian higher education.

Two gaps remain. First, much of the local evidence concerns a single tool or a different genre, such as essays, rather than the thesis as a whole. Second, perception is often treated as one overall score of "positive" or "negative," which hides whether feeling good about AI, actually using it, and believing it is reliable go together. These can diverge. A student may feel confident and use AI daily while doubting that its output is accurate. The ABC (affective, behavioral, cognitive) model offers a way to look at these components separately. It has been applied to students' attitudes toward ChatGPT as a learning tool (Ajlouni et al., 2023), but it has rarely been used to profile EFL thesis writers in an Islamic higher-education setting, where questions about the responsible use of technology are part of the institutional culture.

LITERATURE REVIEW

AI writing tools in EFL thesis writing

In this study, AI writing tools refers to applications that use machine learning and natural language processing to assist with writing tasks, specifically ChatGPT (idea

generation, drafting, and explanation), Grammarly (grammar, punctuation, and style feedback), and QuillBot (paraphrasing and summarizing). Research in EFL contexts has documented how learners and teachers work with such tools. Krajka and Olszak (2024) explored on-demand AI assistance in academic writing instruction, and Su et al. (2023) examined collaboration with ChatGPT in argumentative writing classrooms. Ya'u and Mohammed (2025) reported that most Nigerian university students in their sample used AI-assisted writing tools, mainly for grammar correction and sentence structuring, and recommended structured integration that balances technology use with critical thinking.

Benefits and risks

The benefits most often reported are speed, immediate feedback, and linguistic accuracy (Kohnke et al., 2023; Zuhriah et al., 2024). The risks are equally consistent. Zhai et al. (2024) reviewed 14 studies and concluded that over-reliance on AI dialogue systems can undermine students' cognitive abilities, including critical thinking and decision-making. In a survey of 309 health-science graduates, Milton et al. (2024) cautioned that relying on AI tools only for generative purposes could significantly affect independent writing. The evidence therefore supports neither uncritical enthusiasm nor blanket rejection, which makes students' own appraisal of benefit and limit an important object of study.

The ABC model of perception

The ABC model treats a person's orientation toward an object as having three components: an affective component (feelings, enjoyment, comfort), a behavioral component (what the person actually does), and a cognitive component (beliefs and evaluations). Ajlouni et al. (2023) used this structure with 623 undergraduates at the University of Jordan and reported moderate affective, and high behavioral and cognitive, components of attitude toward ChatGPT as a learning tool. The affective dimension matters in writing because positive emotion is linked to academic engagement. Wang et al. (2025) showed that positive emotions directly predicted undergraduates' academic engagement, and Zhang et al. (2024) found that enjoyment was positively associated with engagement and negatively with burnout among EFL learners. If AI tools make thesis writing feel more manageable, this could matter for persistence. The cognitive dimension is where the risks identified by Zhai et al. (2024) and Milton et al. (2024) would show up as doubts about reliability or about the tool's effect on thinking.

METHOD

Design and ethics

The study used a cross-sectional quantitative survey design (Creswell & Creswell, 2023). Participants were told the purpose of the study and that participation was voluntary

and could be withdrawn at any time. Informed consent was obtained, no personally identifying information was collected, and responses were used only for academic analysis.

Setting and participants

The study was conducted at Universitas Islam Negeri Alauddin Makassar, South Sulawesi, Indonesia. The population was the 88 students of the 2021 cohort of the English Education Department, who were in or had completed thesis writing. Thirty students (34% of the population) took part and were drawn by simple random sampling.

Instrument

The questionnaire was distributed through Google Forms and followed the ABC structure adapted from Ajlouni et al. (2023). After a short demographic section, it contained 20 items: 7 affective (confidence, enjoyment, convenience, enthusiasm, motivation, reduced stress, and overall experience), 6 behavioral (frequency of use, idea generation, grammar and vocabulary improvement, paraphrasing or summarizing, use of different tools for different needs, and daily reliance), and 7 cognitive (improved quality, reliability and accuracy, structure and coherence, critical thinking, usefulness as a learning aid, help in avoiding plagiarism, and awareness of limitations). Items were rated on a 5-point Likert scale from Strongly Disagree (1) to Strongly Agree (5), with Uncertain as the midpoint (3).

Data analysis

Responses were analyzed with SPSS (Field, 2024), producing item and dimension means, standard deviations, and sums. For interpretation, each score was converted to a percentage of the maximum possible (sum of scores ÷ [5 × number of respondents × number of items]) and read against five bands: 0–19.99% Strongly Disagree, 20–39.99% Disagree, 40–59.99% Uncertain, 60–79.99% Agree, and 80–100% Strongly Agree. All percentages below were recalculated from the item sums and are reported to one decimal place.

FINDINGS

Overall profile

All three dimensions fell in the "Agree" range (Table 1), with mean item scores of 3.58 (behavioral), 3.51 (affective), and 3.45 (cognitive). Across all 20 items and 30 respondents, the mean item score was 3.51 (70.2% of the maximum). The 95% confidence intervals overlapped substantially (behavioral 3.23–3.94; affective 3.11–3.91; cognitive 3.12–3.78), and each lower limit lay in the Uncertain range. The differences between dimensions therefore cannot be read as a ranking; the profile is better described as moderately positive, with a substantial share of uncertainty.

Table 1. Dimension-level results (N = 30)

Dimension	Items	Mean total score	SD	Min–Max	Sum	% of maximum	Criterion

Dimension	Items	Mean total score	SD	Min–Max	Sum	% of maximum	Criterion
Affective	7	24.57	7.560	7–35	737	70.2	Agree
Behavioral	6	21.50	5.752	6–29	645	71.7	Agree
Cognitive	7	24.13	6.180	7–34	724	69.0	Agree
Cognitive (excl. C7)	6	20.40	–	–	612	68.0	Uncertain

The standard deviations and ranges show that agreement was not uniform. In each dimension the minimum total equals the number of items (7, 6, and 7), meaning that at least one respondent gave the lowest possible rating on every item. In the affective dimension the maximum (35) shows that at least one respondent gave the highest possible rating on every item. The averages therefore conceal a mix of strongly positive and strongly negative views. Uniform ratings across all items may also reflect inattentive responding; because individual response patterns were not screened, this possibility is noted as a limitation.

Affective dimension

Affective item means ranged from 3.37 to 3.73 (67.3–74.7%; Table 2). The highest-rated item was feeling confident using AI tools (74.7%), followed by enjoying thesis writing with AI (72.0%) and finding AI tools convenient and helpful (71.3%). Motivation and reduced stress were the lowest affective items (both 3.37, 67.3%) and fell in the Uncertain range. Students thus endorsed confidence and enjoyment more strongly than the claims that AI makes writing less stressful or more motivating; on average, students were undecided about these two benefits.

Behavioral dimension

Because the behavioral items asked students how far they agreed with statements about their use of AI, they indicate reported patterns of use rather than measured frequency. Behavioral item means ranged from 3.47 to 3.77 (69.3–75.3%), all in the Agree range. Paraphrasing or summarizing complex texts was the single most endorsed behavior among all 20 items (75.3%), followed by improving grammar and vocabulary (73.3%) and using different tools for different needs (71.3%). Generating ideas (70.7%), frequent use (70.0%), and daily reliance (69.3%) were slightly lower. Language-focused uses were therefore somewhat more common than idea generation, and "daily reliance" was the least endorsed behavior, which suggests integration into routines but not total dependence.

Cognitive dimension

Cognitive item means ranged from 3.30 to 3.73 (66.0–74.7%), and three cognitive items fell in the Uncertain range. The most endorsed item was the statement that AI tools still have limitations, such as weak contextual understanding or originality (74.7%). The least endorsed were the statements that AI-generated content is reliable and accurate (3.30, 66.0%)

and that AI improves critical thinking and writing skills (3.30, 66.0%); improved thesis quality (3.37) also fell in the Uncertain range. Perceived usefulness as a learning aid (71.3%) was the highest of the evaluative items, followed by structure and coherence (68.7%), help in avoiding plagiarism (68.7%), and improved thesis quality (67.3%).

Table 2. Item-level results (mean on 1–5 scale; % of maximum)

Dimension	Item (abridged)	Mean	%
Affective	A1 Confident using AI tools	3.73	74.7
	A2 Enjoy writing thesis with AI	3.60	72.0
	A3 AI is convenient and helpful	3.57	71.3
	A4 Enthusiastic about using AI	3.43	68.7
	A5 More motivated with AI support*	3.37	67.3
	A6 AI makes writing less stressful*	3.37	67.3
	A7 AI positively influences my writing experience	3.50	70.0
Behavioral	B1 Frequent use of AI tools	3.50	70.0
	B2 Generate ideas or content	3.53	70.7
	B3 Improve grammar and vocabulary	3.67	73.3
	B4 Paraphrase or summarize complex texts	3.77	75.3
	B5 Use different tools for different needs	3.57	71.3
	B6 Rely on AI in daily writing routine	3.47	69.3
Cognitive	C1 AI improves thesis quality*	3.37	67.3
	C2 AI content is reliable and accurate*	3.30	66.0
	C3 AI helps structure and coherence	3.43	68.7
	C4 AI improves critical thinking and writing skills*	3.30	66.0
	C5 AI is a useful learning aid	3.57	71.3
	C6 AI helps avoid plagiarism	3.43	68.7
	C7 AI still has limitations	3.73	74.7

Note. N = 30.

As Figure 1 shows, 15 of the 20 items fell in the Agree range and five fell in the Uncertain range (A5, A6, C1, C2, and C4); no item reached Strongly Agree, and none fell below Uncertain. The spread between the highest item (B4, 75.3%) and the lowest items (C2 and C4, 66.0%) was 9.3 percentage points, so the differences between individual items were larger than those between dimensions. Moreover, 11 of the 20 items were at or above 70%, and these were concentrated in the affective and behavioral dimensions; only two cognitive items (C5 and C7) reached this level.

The cognitive profile is also affected by the direction of item C7. This item expresses a limitation, so agreement with it signals caution rather than a favorable view. When C7 is set

aside, the six remaining cognitive items have a combined mean of 3.40 (68.0%; Table 1), at the upper limit of the Uncertain range. Students' evaluations of what AI does well were thus more reserved than the composite suggests.

DISCUSSION

Confidence without complacency

The central pattern is that students were comfortable with AI and at the same time unconvinced of its reliability. Confidence (A1) and awareness of limitations (C7) were the highest affective and cognitive items (both 3.73, 74.7%), while reliability (C2) was among the lowest items (3.30, 66.0%) and fell in the Uncertain range. This fits the mixed picture in earlier Indonesian studies, where positive views of usefulness coexisted with concern about accuracy, coherence, and plagiarism (Selly et al., 2025; Zuhriah et al., 2024), and it echoes the finding of Ajlouni et al. (2023) that the components of attitude toward ChatGPT do not rise and fall together. For thesis writers, the practical meaning is that students see AI as a tool to be checked, not an authority to be trusted.

What students do with AI

The behavioral results show a preference for language-focused tasks. Paraphrasing and summarizing, and grammar and vocabulary improvement, were the most endorsed uses, which is consistent with Ya'u and Mohammed (2025), who found grammar correction and sentence structuring to be the most common uses in their sample. These uses are also those with the clearest, checkable output, which may explain why students are more willing to rely on them. The lower endorsement of daily reliance (69.3%) suggests that AI is a regular but not constant companion. Even so, Milton et al. (2024) and Zhai et al. (2024) warn that heavier reliance, particularly for generating rather than editing text, could weaken independent writing and critical thinking. The present data cannot test that claim, but the cognitive results are consistent with students sensing the risk: critical-thinking gain (C4) was among the two lowest-rated items.

Emotion as a possible mechanism

The affective results are positive but unspectacular. Confidence and enjoyment were endorsed more than motivation or reduced stress. Because positive emotion has been linked to academic engagement and lower burnout (Wang et al., 2025; Zhang et al., 2024), AI-supported confidence may help students persist through a long writing task. This is an interpretation, not a finding: the study did not measure engagement or persistence, and the lower stress and motivation scores suggest that AI is not a cure for thesis anxiety. Research on second-language writing helps to explain this pattern: writing anxiety involves fear of evaluation and avoidance behavior that a tool alone is unlikely to remove (Cheng, 2004),

whereas the higher confidence rating is consistent with the role of self-efficacy beliefs in writing (Pajares, 2003).

Heterogeneity

The wide range of total scores (for example, 7 to 35 on the affective scale) is a reminder that an "Agree" mean is not a consensus. Some students are strongly positive and some strongly negative, so supervisors should not assume that all supervisees use, or want to use, AI in the same way.

A belief worth examining

Students agreed (68.7%) that AI tools help them avoid plagiarism through paraphrasing or citation suggestions. Paraphrasing a source with a tool does not remove the need to cite it, and tool-generated text can itself contain unsupported claims. Whether students hold this belief accurately is not something a Likert item can show, but it is a sensible topic for supervision and AI-literacy sessions, given the concerns about plagiarism and accuracy noted by Selly et al. (2025). Research on generative AI and academic integrity similarly warns that fluent machine-generated text blurs the boundary between legitimate assistance and misconduct (Cotton et al., 2024). Supervisors can address this directly by asking students to show the source behind any paraphrased passage and by making clear that AI-assisted paraphrasing still requires citation.

Responsible use in an Islamic university context: a contextual reflection

Although the questionnaire did not measure religious or institutional values, the setting invites a brief contextual reflection. As a state Islamic university, the institution identifies itself with Islamic values, and ethical ideals such as honesty and trustworthiness, which are widely emphasized in that tradition, overlap with the principles of academic integrity. The cautious profile observed here, in which students welcome AI support but question its reliability, may offer a constructive starting point for linking AI use to such values, in line with national and international guidance that stresses ethical, transparent, and responsible use of generative AI (Direktorat Jenderal Pendidikan Tinggi, Riset, dan Teknologi, 2024; Miao & Holmes, 2023). Whether religious or institutional values actually shape students' AI use remains a question for future research.

IMPLICATIONS

For **supervisors and lecturers**, the profile suggests building on students' existing confidence with explicit guidance on verification: checking AI output against sources, distinguishing editing from generating, and acknowledging AI assistance transparently. For **departments and institutions**, short workshops on AI literacy and academic integrity would address the gap between perceived usefulness and perceived reliability, and would fit an

Islamic university's emphasis on using knowledge and technology responsibly. For students, the results support using AI as a companion for language-focused tasks while keeping the argument, interpretation, and citation decisions their own, which is consistent with the recommendation of Ya'u and Mohammed (2025) to balance AI use with critical thinking.

LIMITATIONS AND FUTURE RESEARCH

The sample was small (n = 30) and came from one department and one cohort, so the findings describe these respondents and should not be generalized. The data are self-reported perceptions, not measures of writing quality or actual AI use. The sampling description combined random selection with an interest in students engaged with AI tools; if respondents were more experienced AI users than the population, positive appraisals may be overstated. The composite scores treat all items as favorable, although item C7 expresses a limitation, and only descriptive statistics were computed. Future studies could use larger and more varied samples, compare user groups (for example, by tool or frequency of use), add inferential tests and reliability coefficients, and combine surveys with interviews or writing samples to examine how perceptions relate to actual writing outcomes.

CONCLUSION

EFL thesis writers in this study appraised AI writing tools consistently positively across feelings, behavior, and beliefs (70.2%, 71.7%, and 69.0%), yet their strongest cognitive agreement was that AI has limitations, and their weakest was that AI is reliable or improves critical thinking. They can be described as confident but cautious users. The practical task for supervisors and institutions is not to promote or restrict AI but to help students turn cautious confidence into skilled, transparent, and independent use.

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